SOCIAL LIFE IN ANCIENT EGYPT

W.M.FLINDERS PETRIE

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SOCIAL LIFE IN ANCIENT EGYPT

BY

W. M. FLINDERS PETRIE

D.C.L. F.R.S. F.B.A.

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PREFACE

The present account of Social Life in Egypt must be looked on as the outline of part of a more serious work, the "Descriptive Sociology of Egypt," which will soon appear, in accordance with the will of Herbert Spencer. That work is directed to be compiled from known authorities; but in Egyptian matters there is so much that has never been formally written, and that has lately come to light, that it was necessary to do a large amount of original writing. In this present handbook, part of the material is recast, to show the outline of this whole field uniformly, and it must be taken as a repast drawn from the storehouse. The bare facts are here united by a cement of familiarity with the land and the people, which have remained so little changed. The later Greek and Roman sources have been largely used, not only because they represent an important period, but because there is such a close similarity between the Egyptians of those times and the present—in spite of Christianity

and Islam—that for the earlier ages of more uniform conditions we may well trust the late accounts of the classics. The latter parts of this volume will be dealt with more fully in a history of the technical knowledge; here we only look at the social effects of the various arts. References have not usually been stated here, as all are fully given in the "Descriptive Sociology," to which any students can refer. It is hoped to issue before long a companion volume on "Religious Life in Egypt."

APPROXIMATE DATES

Dynasty.		By Egyptians.	By Berlin.
I.	Mena	5500 B.C.	3400 B.C.
IV.	Khufu	4700 „	2900 „
XII.	Amenemhat I.	3500 „	2000 „
XVIII.	Tehutmes III.	1500 „	1500 „

FRONTISPIECE

ARRIVAL OF A GARDEN PARTY

This social scene is in the tomb of Nefer-hetep at Thebes, about 1350 B.C. At the left is the garden portal, painted to imitate granite. A party has just arrived; a servant following them attends on two little boys, with their mother, a priestess. The party are passing through the garden, with a vineyard in the background. They arrive in the great open shelter in front of the house, at the back of which mats are spread, and a feast laid out with festoons of garlands. Servants approach to welcome them, one bringing out a stand with a jar of drink, covered by a cap of flowers. The house has a door of imitation granite; the first floor is lighted by small windows, and the top is surrounded by a row of columns supporting the roof, forming a large private open-air resort for the family.

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REFERENCES

The full references will be found in the " Descriptive Sociology of Egypt," soon to be issued ; and the sources of some details which might not be familiar to students have been stated here, by the following references :—

A.E. = *Ancient Egypt* (journal).
B.A.R. = Breasted, " Ancient Records."
B.D. = " Book of the Dead."
B.D.R. = Breasted, " Development of Religion."
B.E.O. = Beadnall, " Egyptian Oasis."
C.C.F.Y. = Carnarvon and Carter, " Five Years."
D.A. = Davis, " Tell el Amarna."
D.B. = Diodoros, ed. Booth.
G.A. = Garstang, " El Arabah."
N.Bh. = Newberry, " Beni Hasan."
P.Ab. = Petrie, " Abydos."
P.D.P. = Petrie, " Diospolis Parva."
P.G.R. = Petrie, " Gizeh and Rifeh."
P.H.B. = Petrie, " Hawara and Biahmu."
P.H.I. = Petrie, " Hyksos and Israelite Cities."
P.H.K.A. = Petrie, " Heliopolis and Kafr Ammar."
P.L. = Petrie, " Labyrinth."
P.M. = Petrie, " Medum."
P.N.H. = Pliny, " Natural History."
P.S.C. = Petrie, " Scarabs and Cylinders."
P.Sin. = Petrie, " Sinai."
P.T.A. = Petrie, " Tell el Amarna."
Q.H. = Quibell, " Hierakonpolis."
Q.T.H. = Quibell, " Tomb of Hesy " (Excav. Saqqara, 1911–12).
S.D. = (Sequence Date of Prehistoric Age.)

SOCIAL LIFE IN ANCIENT EGYPT

CHAPTER I

THE FRAMEWORK OF SOCIETY

Society is a very complex structure, and therefore the study of it cannot be simple. In any country at one time there are many varieties of it in different classes, and probably the contemporary differences are as great as those of many centuries in any one class. In different lands under different climates, with different ancestries and different religions, and still more different modes of life, the diversity far exceeds our power of realisation. We can at least examine the factors that go to framing the conditions in which a society grows, and try to trace the discoveries without which it had no chance of growing. It is not too much to say that the discoverer is the maker of society. Each step of discovery or invention reacts on the structure of social relations. We can see this around us to-day, even since the convulsions of social life produced by factory growth;

the present use of electric power, and of the internal combustion engine for motors, will entirely alter the relation of town and country.

In viewing, therefore, the successive social conditions of Egypt, we shall try to see what were the changes of discovery and of knowledge which determined the form of social life.

The earliest stage which we know was that of a hunting people. The Nile filled the valley, there was some rainfall on the hills, enough to support gazelles, wild oxen, elephants, and various animals now only known in Central Africa. There could not be pastoral life, as the herbage was not dense enough to make enclosure practicable. Possibly sheep could be kept together by careful herding. The first condition for a hunting life is the reservation of rights over an area by the tribe, excluding other tribes.

Our notice "Trespassers will be prosecuted" is the most venerable formula that we have. Tribal wars over hunting grounds and collecting grounds have always been going on, for getting meat, fruits, seeds, roots and herbs. The tribe is organised to protect those rights. The same social order is seen in animals; wild cattle and dogs are exacting about their boundaries. Lately it has been observed that birds each season take up definite hunting grounds and defend them against all comers, fighting for land before the

mating season. Even plants do the same, spreading broad leaves far out to keep any intruder from growing too near. Some races, as the Eskimo and the Arab, avoid this competition by adapting themselves to live in regions which defy intrusion. Similarly, the primrose and snowdrop have adapted themselves to cold, so as to get clear light and air before trees shade them.

This exclusive use of land for food gathering needs a united tribe to defend it from intruders, and therefore a chief to hold it together. The last relic of this order of things has survived in game preserves, and one still meets with men in the true palaeolithic frame of mind, solely occupied with the means of killing animals.

So soon as the rainfall ceased in North Africa and the Nile partly dried up, there were mud flats for cultivation, and there was less game on the hills. A race pushed in from the west, bringing agriculture and abolishing cannibalism, changes linked with the Osiris group of gods. This regular production of food, artificially sown, provided larger supplies, which could be stored in greater amounts than were needed by the cultivators. This provided capital, and thus the means of extending power and control, which made a city-state possible. It has been noticed before how remarkably similar the distances are between

the early nome capitals of the Delta (twenty-one miles on an average) and the early cities of Mesopotamia (averaging twenty miles apart). Some physical cause seems to limit the primitive rule in this way. Is it not the limit of central storage of grain, which is the essential form of early capital? Supplies could be centralised up to ten miles away; beyond that the cost of transport made it better worth while to have a nearer centre. If so, the unit of the nome, or Euphratean state, was the central corn store; and it was the central store of the surplus production which gave the power to form an independent city-state. The medium of exchange regulated the size of the state, and this principle we shall see to apply to later ages. In this period the storage of corn was the only form of capital which could be used to pay for united action, and purposes which were beyond the powers of a village.

For a city-state to control a country was impossible if working on a corn basis. Neither Egypt, nor Greece, nor Italy could establish a wider rule until metals became common enough to be accumulated and used to pay for labour. Corn could not be sent to and fro as taxes, and sent back again for payments over long distances; it was too bulky, heavy and liable to wastage. So soon as Egypt obtained a full supply of copper (as the large tools show), at the close of the

prehistoric age, then united dominion became possible. Values were reckoned in copper down to Ptolemaic times.

The same was the case in other countries, and Italy retained the fiction of weighing copper, as the legalising of a sale, long after silver and gold were the currency.

The next stage of the growth of power depends on a free supply of silver, a more portable form of capital, which allows of tribute and payment over a wide area. Silver was not much used in Egypt, as the supply had to come from a distance, and silver and gold together became fairly usual about the XVIIIth dynasty. Then we see the immense expansion of Egypt, when tribute could be levied in precious metal, and army supplies thus kept up. In Mesopotamia, the turning point of silver coming in is given on the obelisk of Manishtusu (equivalent to the IXth dynasty), when land is valued both in corn and in silver, the old corn unit just giving way to metal. A century later came the first great unification by Naram-sin. In Greece, silver gave the power of union of states under Athens, the joint treasure of silver being kept at Delos. Such sufficed for a united Greece to work upon; but yet Persia, the power with gold, could not be touched. When Philip started a great gold currency, it was then that sufficient fluid capital

could be wielded to attack Persia. The union of that great kingdom, the mightiest known in the world till then, from the Balkans to Lahore, rested upon a vast gold basis, the central store being 200 tons of gold, worth £28,000,000. This capital, immense for the ancient world, was five times as much as the modern reserve of Germany, and was kept in the Julius tower; when it was scattered over the Greek world it gave the Greek the power of welding the later kingdoms, that were each far larger than the Greece which bounded the race a century before. The growth of Roman power similarly expanded on transfer to a silver and then to a gold basis. England, on a silver currency, could only hold itself together; but when the gold currency begins to be effective, the battle of Sluys started the career of expansion, which, after attempting to conquer France, finally found its scope overseas. Lastly, we have gone a step further. International trade can hardly shift all its payments in gold about the world; it has on a credit basis resorted to paper, and so obtained a still more portable system of bills of exchange.

The limit, then, of political union and extensive trade depends on the transmissibility of payments. Corn suffices for a city-state, copper for a small group of cities, silver for an isolated country, gold for an empire, paper for the

relations between empires. Without the means of storing power by capital, a wide dominion can only rest on violence, and is merely a series of plunder raids; the dominion may exist, like that of the Huns or Mongols or Bolshevists, but it is merely a temporary compulsion. No stable and united rule, levying and distributing currency, can be extended beyond the limits available for that currency.

Let us now look back to the condition of society in Egypt in the prehistoric age, when it was working on the corn basis. The chief of each nome would be supported by the central store, but as soon as a wider dominion of several cities joined, the chief would have to travel round and be supported by each in turn. He would have maintenance like a Celtic chief by food-rents proportioned to each estate, so many days at one and another. In England this system of local maintenance remained in Saxon and Norman times, owing to the scarcity of precious metals, and the Court shifted round, mainly between London, Winchester, and Gloucester, during each year, so as not to eat up one district, nor to require all supplies to be sent long distances. It seems very likely that this system in Egypt originated the "royal offering" for the benefit of the dead nobles; the king allowed so much food-rent of his to be allotted to the

ancestral offerings. In one of the earliest tomb inscriptions (Meten) we find "a concession of a domain" to a noble, and "a concession of twelve land endowments for funeral offerings" for his benefit, clearly a royal gift for endowment of the dead. There does not seem in Egypt any trace left, in historic times, of a tenancy for life or lives, with reversion to the State, so we need not suppose this to have been in force in prehistoric society; only, as land was looked on as belonging primarily to the king, we may take it that in the tribal state the land was allotted by the chief, and reverted in case of failure of heirs. There do not seem to have been feudal tenures with special obligations, only all land had to provide various dues and taxes, unless specially exempt because of transfer to a temple.

When the dynastic people came in, just after the beginning of a free use of copper, they organised a considerable and growing class of officials, who were no doubt quartered on the country, but who could use metal as capital in hand, for which every one would work because it was wanted for tools. By the third reign, there was a director of the inundation; in the fourth reign there is a list of the nomes on the seal of an official who had a control in them; there are commanders of fortresses, a director

of the interior, and other offices. After that the high officials rapidly multiply, until in the great settlement of the kingdom under Khufu (Cheops) the priestly property was cut down, and the whole realm organised on lines which it retained ever after. Here we shall only look at the divisions of the various classes and their relations to each other, leaving the statement of their duties in detail to later chapters.

The king was more than the legal ruler. He was the lord of each of the successive states which had been unified into one Government; he acquired thus the various titles of the rulers of those states, and had five different kinds of name belonging to those different dignities. Further, he also acquired the religious positions which had been the due of the various kingships which he absorbed. This is somewhat like the Prince of Wales, who is titular head of all the outlying possessions of England and the old chiefships, successor of the British rulers of Cornwall and Wales, Rothesay, Inverness, Lord of the Isles, Great Steward of Scotland, to say nothing of Saxe-Coburg and Gotha.

The religious functions of the Egyptian king are not sufficiently recorded to show their origins. He certainly performed the daily sacrifice, acting as supreme priest for the country, and every funeral offering was nominally made

in his name. He seems to have had the position, well known in many other countries, that the welfare of the land depended upon his vitality and actions; it is only from this point of view that we can understand the rigid regulation of a set time for everything that he did, his being a slave to his position. Another matter, which surprised the Greeks, was his entire subservience to the law; Diodoros says that they lived not like other kings, without control, but in everything conformed to the laws, not only in government but in private life. This limitation of the kingly power seems to be an evident relic of the submission of various states upon settled terms which were held binding. Thus London admitted William the Conqueror on terms, and the Charter is still the foundation of privileges; the King has formally to ask for admission to the city on state occasions, and but for existing Charter rights a population of seven millions would not be limited to the markets which were established for a hundredth of that number. We see, then, in the limitations of the kingly power in Egypt the traces of his acquisition of states, and of his sacred character as the life of the country. For further detail see the next chapter, on Administration.

The vezier or chief of the administration was called the "royal sealer" in the Ist dynasty,

much as the "keeper of the Great Seal" is the Chancellor in England. By the IIIrd dynasty, the chief justice (*sebekhti*) had taken the lead, and that remained the title of the Prime Minister to the end of the kingdom. He was the pivot of the official world, dispensed office and justice, and received the State reports; we shall consider him further under the Administration. It was the first daily duty of the king to read the reports sent in from the country, yet it is obvious that the amount of religious and other routine of his life must have prevented his managing much personally,—he could not be a Justinian. The vezier, therefore, was essentially of the first importance. When more attention was given to Nubia, a second vezier for the south became needful, and when the high priestesses of Amen ruled the south from Thebes, their high stewards naturally succeeded to the place of southern vezier.

When we look at the various classes of the country, it is evident that there was, very naturally, a large amount of hereditary succession to office and to business. We see the same in England or any other country, although every one is free to change their occupation as they prefer. In Egypt, on the contrary, no artisan was allowed to have another trade or employment, or be reckoned in any other class. Hence,

once in a trade, it was impossible to move out of it, and the natural facility of a boy learning his father's trade tended to fix each generation into the same line. Thus, the impression which the Greeks received when stepping into such a society was that its structure was a group of *genea* or hereditary tribes. They specified the priests, soldiers, and husbandmen, as each owning equal shares of the land, and Strabo says that this was not only an equality over the country as a whole, but that each separate nome was thus equally divided.

This division of each nome into three kinds of holdings suggests a comparison with the three divisions recorded of every nome; these were (1) the canal or riverside fields; (2) the general or middle land; and (3) the land along the desert side, which lay lowest and had marshes or pools in it. When we enter on the details, we find that of these three divisions it is only the middle land which belongs to gods; half the nomes in the Delta have the middle land belonging to gods, Ra, Horus (thrice), Amen, Hapi (twice), Sebek, Bennu, or "the divine fields." It seems clear that this is the priests' land. There is no such reference to military or agricultural holding in the other two divisions. If we may guess, it seems more likely that the military would hold the desert edge to keep the Bedawy out, and for

exercises and a clear marching road at all times of year. However this may be, it seems that the special definition of these divisions, with separate names in every nome, which at first sight appears needless, is quite accounted for, if these were the allotted lands of the three landed classes in each nome.

Let us get some sense of what this holding of the land implied. In the priestly holding the cultivation was done entirely by serfs, and it was free of taxation. It maintained, doubtless, as many persons per acre as the other divisions, but the produce had to maintain the religious and learned classes. It was much like the landed property of the monasteries, which endowment included the education rate and university grants of the time, besides a good deal of the civil service.

As to the military holdings, the fullest population likely on a third of the land would be four millions, or two million males. The army of Ramessu II., according to Diodoros, was 650,000. That would mean that every male served for a third of his life. Excluding those who died before military age, that would be a service of half the adult life (*i.e.*, from twenty to sixty-three in England). This is probably about the practical limit for active service. Hence there would not be any room for serfs on the land, the cultivation

during war being carried on by old men, boys, and women. If, however, the army were of 400,000, as in the XXVIth dynasty, or if it were recruited from the whole population of serfs, then the military holdings might allow of the employment of one or two serfs to each feudatory. Somewhere between these limits was the probable condition; at least it seems that the military holders can only have had a small amount of serf help, and must have worked as cultivators themselves.

The third class, definitely called husbandmen, must have had a different tenure to that of the serfs under the other classes. They must have been free farmers, yeomen, only subject to taxation. It seems that they held the land bordering on the river and canals. This gave them a longer cropping season than the others, for they could sow the beds of the canals as the water receded. This is a favourable ground, as it needs no watering, and is always available, however insufficient the inundation may be for higher ground.

The other classes definitely named by Greek writers are the shepherds, swineherds, hunters, artificers, traders, interpreters and pilots. These none of them occupy lands, the first three merely wandering over unoccupied ground.

In the above statement of the three great

classes we have followed the later authorities, because they alone give a whole view; but we find a rather different arrangement in earlier times of the XIIth dynasty at Siut. After the monarch and his officials, there are only two classes named, the "small man" and "his peasant" or serf. The "small man," or yeoman farmer, could give land for endowments from his own fields, while the lower class was servile, without property, and more or less under control. This accounts for the third class above, but does not refer to the priesthood and military. It may well be that the military class had scarcely arisen at that period as a separate estate of the realm, the wars being only carried on by general levy of the people, the old Saxon *fyrd*.

The essential unit of the country in the early days seems to have continued much the same to our own time. The great man of a village may own anything from 100 to 1,000 acres; his house is the social and economic centre; his servants act as police to arrest petty offenders. In the evening, such are brought before him; he hears the complaints and defence, and levies a fine; the bystanders plead compassion, assert that it cannot be paid, and it is whittled down and time allowed to find the amount. The house is a sort of lounge for all friends during the day; they saunter in, sit about,

chat and smoke, perhaps have some coffee, wander out again. The master may be away or engaged, it is all the same. He has his duties to the Government: to report any serious crime, to keep up the register of boys for recruits, to see that the scribe of lands and scribe of leases do their duty, to keep the peace in general, and feather his own nest in particular. He has great opportunities; if callous and stupid, he worries every one by exactions and injustice; if kind and sensible, he profits by the natural fluctuations of price during the year, the peasant always selling produce cheaply after harvesting it. Thus a prudent man may store the surplus wealth of a district, and yet be looked on as beneficent by acting as relieving officer for any distress. "I gave bread to all the hungry, I clothed him who was naked, I never oppressed one in possession of his property, I spake and I told that which was good. Never was there one fearing because of one stronger than he." All this may be said by many a rich man up and down the country, as well now as fifty centuries ago. To maintain such a standard, a vigorous control by the nomarch or modern *mudir* is needed; without that, such beneficence is the exception and not the rule. Grasping and exaction are only too common in all ages. "Righteousness is cast out, iniquity is in the midst of the council hall; all

men alike are under wrongs, as for respect, an end is made of it. The poor man has no strength to save himself from him that is stronger than he. To criticise an utterance causes enmity, for the heart receives not the truth, and the reply to a matter is not endured" (B.D.R.). All this is true to-day; and to lay the fault on the head men as a class is useless, for every peasant will do just the same if put into power. It is only a strong supervision that can keep the country in peace, and prosper it. In the forty years of British management Egypt has more than doubled its population and increased far more in wealth. The change has been that caused by any strong rule in the past, and the whole country responded as rapidly under Khufu or Amenemhat or Amenhetep.

The official class were great pluralists in early times; it is rare to find a fine tomb without a string of titles of the owner. The scandal grew till the VIth dynasty, and then the corruption broke the country and the Syrian came in. Aba of Deir Gebrawi was, in rank—heir, prince, second to the king; in court—royal seal-bearer, ruler of the palace, keeper of the thrones, chamberlain, master of the wardrobe, secretary; in justice—elder of the judgment hall, scribe of temple records; in religion—chief reciter of magic, sacrificing priest, director of every divine

office, director of divine matters, priest of a pyramid; in the country—ruler of two nomes far apart, over the granaries, fowling pools, and treasuries, over the south land, and keeper of the old southern capital and fortress at El Kab. These and other titles amount to forty offices held by one man, not without emoluments.

The staff of servants kept by the great landowners was considerable. Those of the princes of Beni Hasan may be divided into four classes —personal, household, farm, and official. The numbers here are those employed by Amenemhat and Khnemhetep respectively. Personal staff: 5, 5, scribes; 2, 4, sealers; reporter, steward, body servant, mat spreader, confidential friend, nurse; 4, 1, followers. Household: 1, 2, directors of private rooms; director of warehouse; 3, 5, directors of houses; 2, 1, scribes of values or barter; scribe of the table; guard of the kitchen; guard of things; 10, 3, caterers; brewer; 2 bakers; director of washers; 7, 2, housemaids. Farm staff: 5, 4, directors of farm produce; director of cattle herds; 4, 4, herdsmen; keeper of 1,000 cattle; donkey herd; gazelle herd; 3 directors of fishers; 2 directors of goats; director of estate office; directors of carpenters, weavers, gardeners, potted food (?). The official staff for the public affairs were, governor of citadel; marshal; 2, 2, royal scribes, to keep count of the taxes due,

at the side of the personal scribes ; 3 directors of houses ; 2, 2, directors of treasures ; directors of the hall of judgment, of police, of soldiers, 3 of auditing, of nome, 2 of desert land, of canals, of the 5 men (as intelligible as decemvirs), and of the huntsmen, for Khnemhetep was a great hunter, and netted the desert for game. This list will give some idea of the wide scope of a noble's establishment for his family use and for public administration. Though not all of these titles occur in both tombs, we cannot argue therefore that they did not exist. The great frequency of sealers was because all revenue and dues came in small amounts, being in kind, and not in a lump sum of money ; hence receipts, sealed to give authenticity, had to be given all day long for the produce brought in and given out in course of management.

Coming to smaller units of administration, it is stated that in each city there was an expounder of the law who had to provide what was necessary for the city ; he was not the judge, but rather a prefect who regulated the city business by the law ; he was honoured and dressed in scarlet. After him came the writer of records, or scribe of the registered documents ; the chief judge ; and the chief of the night guard. Though recorded by Strabo, these are, apparently, remains of an old order of things.

The townsmen who were artificers and mechanics were strictly forbidden to change their occupations, the theory being that proficiency was reached best by keeping to one business; but another motive may be seen, in the statement that they must not meddle in civil affairs. This, again, though as late as Strabo, seems evidently to be an early regulation to keep political power in official hands. It accords with the ancient contempt for the countryman, the subject of many satirical sketches in tomb scenes. At the present day, the official class, down to the petty clerk, look on the *fellah* as only fit to be plundered; any injustice or wrong is no matter, "he is only a fellah," and therefore at the mercy of any official, without regard or redress. Though there was a large class of free cultivators, it is probable that the skilled handwork was long the speciality of trained artists in the nobles' establishments. There was no large middle class to create a demand; the noble and his household were supplied with fine work within the domain; the farmer, as at present, was not a purchaser of more than necessaries. There was no rich merchant class, for trade within the country was slight, and abroad it was probably in foreign hands. Thus the free artificer who looked for open business had little opportunity. The official

class were not very numerous in early times, and it was not till the New Kingdom that there was a large bureaucracy to form a purchasing middle class. We see this in the sizes of the houses in the XIIth dynasty town, Kahun. There were about 350 small workmen's and petty clerks' houses, of four to seven rooms, in dense rows, small and crowded; and, superior to those, a dozen great mansions of about sixty rooms with large halls of columns. There was nothing between luxury and poverty. On the other hand, when we come to the XVIIIth dynasty at Amarna, the most usual dwelling is a detached house of a dozen fair-sized rooms surrounded by an enclosure. It is like the difference between the slums of Old Cairo and the villas of Me'adi. Thus the artificer class had reached an independent market but slowly, and late in national development, and had none of the political hold that the scribe and official enjoyed. Free tradesmen had existed from very early times, but only in small numbers, and they were, therefore, insufficient to assert any influence.

It appears that the lower grades of labour formed companies of men. In several instances we find the system of ten men having a headman. Among the miners in Sinai this is the proportion; and the groups of *ushabti* figures usually have one dressed in a kilt or a robe to each ten plain

ushabtis. These foremen could then organise bodies of some hundreds of men for large works. The workmen of the temples and of the cemeteries were grouped in the same manner.

The levy of labour for public works, or *corvée*, was always a natural feature of the management. The inundation left the people unemployed, and at the same time imperilled the great dykes on which the country depended. Hence it was in the common interest that unpaid labour should be organised to keep up the earthworks. Again, during the early summer, after the crops were gathered, about April, there were three months in which nothing could be done on most land, and when the canals, already dried, could be cleaned and deepened. Thus the two main labours for the water supply were due at a time when labour cost the native nothing, and so were naturally a compulsory service. That it needed organising can be seen in the present time; the people of one irrigation basin were in a hurry and cut their dyke to run the water off, with the result that the rush swept away a village lower down; the stores for protecting the dykes need care, and I have seen a man bastinadoed for stealing timber and rope, and so imperilling the country in case of a leak. On the other hand, the people need protection against wasteful claims. Hundreds would be levied where dozens

would have been as effective ; without direction or management they dawdled about, underfed and losing their time. Instead of organising compulsory labour, the British control made the mistake of abolishing it ; so now people must sell crops to pay taxes to be sent to Cairo, and then returned as wages, in which processes the wastage is considerable. The *corvée* in Roman times was only five days in the year, from all cultivators.

Slave labour was but little used in the earlier times. The serfs were attached to the land, had their own homes, and could not be sold. In the XVIIIth dynasty the family slaves could be hired out, but there is no proof of sale. The captives taken in war were a different matter, they could be transferred without question, either by the king or by sale. But we never see negro slaves represented in the XIIth dynasty ; and the whole number of captives taken by Tehutmes III. in twenty years was under 10,000, so they would not add appreciably to the population, though, being trained artisans and selected women, they had a large influence on the upper classes. The remainder of the XVIIIth dynasty had few wars, and probably added little to the slave labour, while those already imported had probably mixed in a few generations with the Egyptians. Ramessu II. did little in continuous warfare, and probably

brought few slaves. The XXth dynasty opened with great slave captures under Ramessu III., who gave to the temples 113,433 men during his reign. The large migrations from the west and from Syria, which he defeated, would have accounted for most of this number. Probably there were more kept on Government work, and distributed to the army and officials; so that a quarter of a million slaves may not be an over-estimate, or about 10 per cent. added to the working population. Most of these were, however, on unremunerative labour, and had to be fed from the rest of the people. The whole of the food offering to the temples would not have maintained the slaves for more than a sixth of the reign.

A curious branch of slavery was the system of contracts of servitude in the XXVIth dynasty. For a certain sum—which may have been a debt, in one case payment for cost of illness—a man agreed to act as a slave in perpetuity, renouncing all property, and his present and future children. If this kind of contract was made in a period when Egypt flourished, it seems likely that it was common in periods of distress. In a campaign in Ethiopia, under Augustus, 1,000 prisoners were reserved for the imperial property, and the rest publicly sold as army booty.

It seems that, on the whole, slavery never attained the serious and infamous proportions that it had in Greece, or in Italy. The serfage, which probably continued throughout the history, prevented the requirement of slave labour on large estates. It was a mild and comparatively harmless obligation, which did not prevent ability from rising, and it saved the land from the ruin which slavery brings.

The most complete view that we have of labour in early times is in the accounts preserved by Herodotos about the building of the Great Pyramid. Though so many ages later in report, yet they fit the conditions so closely that we may believe they are correctly transmitted. He states that 100,000 men were engaged in moving the stones during three months at a time. This agrees with the obvious course of supplying a large amount of labour during the inundation, when there is no other work to be done, and when the high Nile serves to transport the stone across the whole valley from hill to hill. He states that they were ten years making the great causeway, and preparing the site, levelling and cutting the underground passage and chamber. Then twenty years were occupied in building. This time would imply that a gang of eight men (about as many as could work on one block) could move ten stones from the quarry across the Nile, up

the causeways, and raised into place within three months. This would be quite possible with good organisation. There are several causeways beside the main one, still visible on the desert, and they must have been closely packed with working gangs to get up the thousand blocks every day during the working season. Of course there were also highly-skilled masons necessary for the thirteen acres of finely jointed casing, and the internal parts; the barracks for these are still visible, and would hold, at the outside, 4,000 men, who would live there continuously. If half of them were engaged on the casing, each man would have to prepare accurately and fit in place one casing block every three weeks, or rather, a gang of three men doing a block in a week. This also is a reasonable result. Of course, the great blocks at the base would take far longer, and the small courses would be done in perhaps half the time for each stone.

All of this work, with such great bodies of men, would require astonishing skill of organisation, or they would crowd hopelessly in so limited a ground. Much nonsense has been written about the oppression of the people, their tears and groans. With the splendid organisation evident in the work, the people must have been well managed, and there was no hardship whatever in carrying out the work. Each man might be

levied twice in his lifetime ; he would be just as well off there as at home, for he could do nothing during the inundation. All that was necessary was to transport a couple of hundredweight of food with him, which he would eat there instead of at home. The immense gain to the people was the education in combined work and technical training. Such skill in united action continued, as in the transport of immense weights, and under the Ptolemies, when 4,000 rowers must have kept perfect time together in rowing the immense ship which Athenaeus describes.

The scope of women's work was doubtless the house and the food, among the bulk of the people. But, curiously, this work seems entirely to belong to men in the great houses. The cooking, serving, writing and music were performed by men, and only rarely were women so employed. They did washing, however. In the field work they had much to do ; the farm produce was generally carried by them, small stuff in baskets on the head, and birds in the hand. They also went to market. Winnowing at harvest was done by women. In one case a woman is steering a large cargo boat. All of this refers to the IVth to VIth dynasties. In the XIIth dynasty women are shown spinning and weaving, and as musicians. In the XVIIIth dynasty it is men who do the weaving. On reaching Greek times, it is

said that the women attend the markets and traffic, but the men stay at home and weave. This is true at the present time in the northern country, which was familiar to the Greeks. Women there go unveiled, and will work readily in digging and carrying. In the south, however, it is looked on as shameful for a woman to go to market. The Copts maintain far more liberty than the Muslimin, and women, unveiled, will sit at their door sewing. In private houses they will meet European visitors, just as Greeks or Italians do.

There was a large class of men in Egypt outside of the productive work of the country, those engaged in the extensive business of the cemeteries. The excavation of the rock tombs was an immense work; some of the pits of the IVth dynasty are about 8 feet square and 80 feet deep; in other places immense halls, 30 or 40 feet wide, were hewn out in the face of the cliff. In the XVIIIth dynasty, at Thebes, hundreds of tomb chapels of a small size were cut, plastered over to cover the roughness, and then painted. Beside all the sheer hewing, there was a large staff of artists engaged. There is no age of the world so fully portrayed as the Old Kingdom in the tomb sculptures of Saqqareh. A noble's tomb will usually have 500 to 1,000 square feet of sculpture, with one or two hundred figures, all

represented in active work. This required a large staff of labour of all grades, rough and skilled, from the quarryman to the artist. As ages went on, all the undertaker's business became more of a mere trade. The mummifying was scamped, bodies were made up anyhow in the wrappings, a baby consisted of an old man's skull for bulk and a thigh bone for length; cat mummies only had a few bones; crocodile mummies contained only an egg and some straw. The tomb cutters formed colonies in the cemeteries, in regular grades of authority, and they had to swarm out when their rations were neglected, and fight for supplies. Beside these, there was the great hierarchy of priests engaged in the funeral rites; their work was not ended with the burial, but, for long years after, they had to perform the offerings which they had contracted to supply. All of this implied a large number of the population on work which was unproductive. All such kinds of work make life harder for the rest of the community, as it needs the feeding of so many useless mouths by the labour of others.

Regarding the total population, there is but scanty information. As the Egyptian race is prolific, having doubled in forty years lately, or at the rate of increasing to six times the number in a century, it is probable that the country filled

up very quickly in all periods of security and good control, such as the Old Kingdom, when we may believe the maximum population was attained. In the Rameside times, the military third of the land, providing 650,000 men of fit age, implies a population of ten or twelve millions. In the time of Diodoros, after the collapse of Ptolemaic management, it was seven millions, or seven and a half millions according to Josephus. In the eighth century the Arab poll-tax implies six millions besides children and the aged, probably ten millions in all. In 1878, after the miserable native management, it was five and a quarter millions; after forty years of British control it is thirteen millions. So, roughly, we may say that it rapidly varies from six to twelve millions according to the competence of the administration. With a birth rate of sixty and a death rate of forty, changes are quickly felt.

CHAPTER II

THE ADMINISTRATION

EGYPT has always been under a monarchy; the kingly power may have been subdivided, until every nome was independent, yet the rule was always that of a single chief in each section. The absence of republican interludes, so frequent in other parts of the Mediterranean, was apparently due to the monarchy being strictly limited by law. However bad an Egyptian might be personally, he could not earn the hatred of his subjects like the irresponsible Greek tyrants or Roman emperors. He was held in by being part of a highly organised official machinery, in which every one knew their own business, and his official acts were part of that machinery; as to his private life, even that was not his own, but he had to act every hour according to fixed routine, without room for the licence of a Dionysius or a Caligula. We read of State trials within the royal family in the VIth and the XXth dynasties, strictly according to legal form, without even the presence of the

king; he was not as much master in his own house as Claudius or Henry VIII.

The political position of the king was that of successor to several separate states, each of which was probably tenacious of its rights, and thus a series of obligations were combined in the royal position. He was by descent the head of the old southern capital Hierakonpolis (*Nekhen*); and, as such, the falcon was his great emblem, so when the king died it was said the falcon had flown to heaven. Next, he was lord of the opposite city of El Kab (*Nekheb*), and also of the northern capital of the delta, Buto, the double lordship being figured by the vulture and uraeus of the two city goddesses. He also acquired the dominion of Sais, figured by the bee (*bati*), and paired this with the rule of the south land figured by the rush, *juncus* (*nesut*); whether that represented a definite capital originally is not clear, it certainly was the emblem of the south land. The Set tribe, who were so strong in the IInd dynasty, appear to have been finally crushed by the great change of the IVth dynasty, when the falcon king triumphed over Set-nubti, represented by the sign *nub*, on which the falcon stands. The last acquisition was taking over the rights of the old Heliopolitan kingdom by inheritance from the high priests, at the Vth dynasty, after which the king is the

heq, represented by the sceptre treasured in the temple there. A prominent religious title of the king was High Priest of Horus, denoted by the cartouche border to the royal name. This is seen as the collar round the neck of the high priest Ra-sonkh (in the Louvre), and it seems to have been taken over by the IIIrd dynasty, as it first appears round the name of Maka at Zowyet el Aryan.

The religious functions of the king comprised not only the high priesthoods of Horus and of Ra, but he also made daily sacrifice for the nation ; and as during life he endowed the living chiefs with lands, so also at their death he endowed them for the future life with land for keeping up their offerings (so named in one of the earliest tombs, that of Meten), and hence all tomb endowments were a " royal offering." This constituted the regular formula of every funeral stele throughout the history. Thus the king was the maintenance of his people during life by his vicarious position, and after death by his sustenance of them in the tomb. Where the tomb endowments were not of such value as to be gifts of land, yet the various foods named would be rent-charges on the produce of king's land, or appropriations of the food-rents to which the king had a right.

As the complexity and amount of business

increased during the growth of the kingdom, it became impossible for the king to transact it all personally. Hence, by the close of the IIIrd dynasty, Sneferu made his son Nefermaot seal-bearer and chief justice, and his son Rahetep high priest of Ra at Heliopolis, and Khufu did the same for his son Merab.

Passing to the state functions, the first great duty of the king on his accession, from the Ist dynasty onward, was the examination of the frontiers, to establish his authority, " going round the wall," and " uniting the two lands of South and North." He was also the head of the army, and all conflicts and triumphs are ascribed to him personally. That this was no fiction we see in the personal conduct of the Ethiopian war in the XIIth dynasty, the terrible death of Seqenen-ra in hand-to-hand fight in the XVIIth, the personal lead of the army by Tehutmes III. and Ramessu II. in the XVIIIth and XIXth. There is no evidence that they resigned affairs to generals, as English kings have done since the battle of Dettingen. The king also travelled much about, inspecting public works and mines, examining into the conduct of officials and checking abuses.

The course of daily life of the king is only stated by Diodoros, under Augustus. It may be the Ptolemaic routine, but more probably it is an earlier statement of the XXVIth dynasty pro-

ceedings, which, in turn, would continue the custom of much earlier ages. Every hour was definitely allotted to various duties, to do something enjoined, and not to indulge in pleasures. On rising in the morning, the first thing was to read the despatches which had arrived, and probably this involved dictating the replies. Then came the ceremonial purification, the assumption of the robes and insignia, and proceeding to the sacrifice. Before that act the high priest, with king and people standing around him, prayed for the health and prosperity of the king (*onkh*, *uza*, *senb*), recited the praises of the king, and then a curse on all offences that had been ignorantly committed, laying the blame on the ministers. This must have been a considerable criticism of affairs, which, owing to the great power of the priesthood, would be hard to control officially; it is said that this was to guide and check the royal conduct. It is not stated whether the manual act of sacrifice was by the king or the high priest, but it was the king's ceremony, and he inspected the entrails, as the Assyrian king, "to use divination . . . looked in the liver" (Ezek. xxi. 21); he then finished the sacrifices, presumably the offerings of wine, oil, and other libations. Then followed the sermon, when the priests read edicts, laws and historical passages fitting for the time.

The food of the kings is stated to have been plain and limited, which points to their being kept under regimen to preserve their health for the well-being of the country. In Africa, when a king shows weakening health, he must be killed to prevent the country similarly suffering. It would appear that the Egyptian kingship arose through the magician and the priest, and not from physical leadership.

The death of the king is described in the XIIth dynasty : " The god entered his horizon, the king flew up to heaven and joined the sun's disc, the follower of the god met his maker. The palace was silenced and in mourning, the great gates were closed, the courtiers crouching on the ground, the people in hushed mourning." Three thousand years later, it is said, " Upon the death of a king the Egyptians generally lament with a universal mourning, rend their garments, shut up the temples, inhibit sacrifices, and all feasts and solemnities for the space of seventy-two days ; they cast dust likewise upon their heads, and gird themselves under their breast with a linen girdle ; and thus men and women, two or three hundred sometimes in a company, twice a day go about singing mournful songs in praise of the deceased king . . . they neither eat flesh, nor anything baked or heated by the fire, and abstain from wine and all sumptuous fare."

There does not seem to be any trace of the Malagasy universal licence on the king's death; this accords with the king being subject to law, and not being the sole fount of law and order.

The powers of the king were strictly limited. "He could not do any public business, condemn or punish any man to gratify his own humour or revenge, or for any other unjust cause; but was bound to do according as the laws had ordered in every particular case. . . . The kings, therefore, carrying this even hand towards all their subjects, were more beloved by them than by their own kindred." Though this is a later statement, it is to be accepted for the early times, as in the VIth dynasty a queen was tried by a judge, who wrote the report with another judge, the king taking no part, and not appearing to act in the case. He may probably have given judgment finally, in this case as in other serious causes, but the examination and condemnation of criminals was entirely a matter of legal procedure.

The theory of a divine kingship was thus greatly limited; but as the Egyptian did not consider his gods to be omniscient, or free of infirmities, there was little incongruity in accepting the royal divinity. Probably the greatest scope of the king was in his initiative; the regulation of affairs, the enterprise of public works, the management of foreign relations, all gave scope,

and there is express mention of the king's initiative in Aahmes I. building a memorial of Tetashera, and Hatshepsut erecting her obelisks. Sety I. also visited the mines, and gave orders for the cistern and temple at Wady Abad because he noticed the difficulty of the work there. The treaty power was also the king's; but the formality of the clauses of the Hittite treaty suggests a lawyer's drafting. The appointment of all the high officials also rested with the king; in the VIth dynasty the king was prayed to grant the rank of *ha* prince to Zau, and made the decree accordingly.

A very important function was the granting of land. Estates were often declared to be granted by the king to nobles, and grants also made to temples for the priesthood. It might be possible in early times to give these out of waste land, improved by new canals or drainage; but that resource would soon be exhausted. Whence, then, was the royal bounty? Unless the crown held a large part of the country, it could not give so much out of crown lands. Different terms are used for *gift* within a family, for *acquisition* by royal deed, and for *concession* as of funeral endowments. These last two seem to refer to an absolute grant and to a life tenancy. It may be that a royal gift did not refer to the land itself, but to freeing it from royal claims of taxation, as

the temple lands were freed. The taxes constituted the king's claim on the land as overlord, so remitting the tax would be practically a gift of the land, and would not imply any change of occupation.

The functions of the vezier were most important, as he carried into effect all the administrative side of the royal functions, apart from the religious aspect. We have a full account preserved for the XVIIIth dynasty, fortunately, in the tomb of Rekhmara. Many of these duties are difficult to interpret, but we may get some idea of them under the following heads: General management; appointment of four reporters to state three times a year all the affairs of their provinces, to produce the documents and bring auditors; to receive the reports of the "corner-men" (or district inspectors, *nazir el qism*), and their census lists; to attend to nome boundaries, allotments of land, inundation, canals, orders for second crops, cutting down of trees, the arrears of taxes, the grievances of the local governors, the robberies in the provinces, and quarrels. For the king, he had to send out royal messages to the nomes, send proclamations, order the messenger of the royal domain, appoint the superintendent of letters in the hall of the palace, and manage the king's body-guard and royal expeditions. In justice, he had the pro-

motion of judges, and the appointment of a door-keeper to the judgment hall. In the temples, he examined the short-comings of the offerings (peculation by priests), and division of tribute. He had to inspect the tribute and the gold store with the seal-bearer. The regulation of Nile traffic was also his duty, directing the cargo-boats, pilots and steersmen. Several other offices are now missing, or unintelligible, in the list; but it shows how ubiquitous in administration the vezier was, and how greatly the welfare of the country depended on his control and his honesty. In the XVIIIth dynasty and onward, he was usually *mer nut*, *thăti*, or prefect of the capital, and leader.

This pressure of business made it needful, early in the XVIIIth dynasty, to appoint a southern vezier at Thebes, while the northern was for the Delta and Middle Egypt. Further, there was a similar governor of Nubia and Ethiopia, the "royal son of Kush."

Enormous influence must have been wielded by the highest Court official, "the fan bearer at the king's right hand." He was always a man of high birth, and selected for his power of command to keep order in the presence. With every affair of the king coming before him, with the royal ear always open to his influence, probably with large powers of exclusion of the

importunate, there was no rival to his control of the fortunes of an individual, and sometimes of the nation.

The other personal officials who had access to the king were "the eyes and ears of the king," who made confidential enquiries; the "messenger in the country who filled the heart of the king"; the tutor, "making excellent of the king"; the "scribe of Horus the strong bull" (king); the "chief of the palace of the king"; the "attendants at call"; the "chief of the guard"; the huntsmen "followers"; and the "dragoman in all lands."

The principal courtiers were the "chief royal sealer"; the "messenger" and "scribe of the royal table"; the "chief messenger of his Majesty," to regulate precedence and order; the "chief royal recorder"; the "keeper of the diwan," or interior apartments; the "keeper of the garden" (a title even held by Senmut); and the chief architect, who designed and carried out the pyramids and temples.

The officials who were in personal relation with the king were,—the chief secretary "over the secrets," only in Old Kingdom; scribe of the seal; guardian of the seal; royal scribe of reporting; scribe of the office of letters in the palace; the praisers and harpers; the carrier of the bow; the head of the followers; the chief charioteer;

head of the chariots; the director of the royal boat; the scribe of letters of the queen; the keeper of the queen's palace.

The staff of the palace comprised the scribes of the table, of the provisions, of the granary, of accounts, the "skilled chief scribe of accounts," or chief accountant of the daily accounts, the scribes of the palace, of the treasury, of the accounts of silver and gold, of the accounts of the royal inspectors of the treasury, also of the sacred writings of the king; the chief interpreter of the king; the goldsmith; the maker of glorious works; head of the stable; overseer of the mares and of the horses; messenger for the dogs' food; the sandal maker; the cook of the queen's palace; and the messengers of the palace.

The chief justice was the most important man after the vezier, when the offices were not united. His title was the judge (*săb*) of the court of judgment (*zădu*). Whether the title *thăti* is a leader in general, or a leader only judicially, is not clear. Rekhmara sits in the *zădu* of the *thăti* to give judgment, but also to receive tribute. Yet he is called not only the *săb er Nekhen*, but also *thăti er Nekhen*; so unless the latter means two independent titles, *thăti* would be equivalent to *săb*.

The southern court consisted of the council of thirty, who elected their own president; they

were known as the *ur* or great ones. In the north there was a council sitting in six courts at Ath-taui (Lisht) under the vezier. The course was for the plaintiff to put in a written statement, the defendant to write in reply; then there was a reply allowed on each side in writing. On those documents the case was judged. The "great ones of the south" had to receive the registration of every householder and list of his family and dependants.

The lower court was ruled by a judge in each city, at least in late times, and probably earlier, as the title *săb*, without further distinction, is frequent. There was also a legal referee, the "expounder of the law," who is apparently the earlier *mer uzut nebt*, "keeper of all the decrees," otherwise "keeper of all words of decrees of the king," or keeper of all judgments," *uzo*. All of these are Old Kingdom titles, and show how permanent the offices were throughout the history. Of minor officials there was a scribe of accounts of the judicial court, *tă;* a scribe of the petitions and royal checking scribes, *obu* ("over against," perhaps the *anti-grapheis*).

The heads of local government were the nomarchs. When the central government decayed, then the local government revived as a city-state. After such periods the nomarchs are found recording by their own years of office,

and not by the king's years. Owing to the lack of sufficiency of precious metals for circulation, the greater part of the charges of government were left in local control, what we may call light taxes and heavy rates. Hence there was never a strong centralisation, and the local administration was always ready to carry on without a central power. When the king was strong, he claimed to choose the nomarchs, though even then they probably continued in the same family. A nomarch who favoured the king's enemies was rooted out and cursed to all generations, yet (according to the Koptos decree) he does not seem to have been executed. There was a royal deputy in each nome, and overseers of the crown property in charge of farms and herds. The descent of the nomarchs was in the female line, and the daughter could rule during the minority of her son, as in the larger dominion of the kingdom, where a minor king is usually shown with his mother, on monuments. The nomarch was also high priest in most cases, as the king was the offering priest of the land.

The subordinates of the nomarch were the deputies in each corner of the nome, the "corner men" (*qenbti*), now *nazir el qism;* these reported directly to the vezier, who thus kept a check on the princely nomarch. In each city the control rested with a prefect, who had to see

to the welfare of the city and declare the decrees to all concerned, a scribe of records to keep all the registers of land and deeds, a chief judge, and a chief of police or the night guard. All of these offices were certainly very ancient, though we only find them stated in late times.

The management of the country districts was left to the chief men, known as *saru* (captains or chiefs), who were similar to the sheykhs of the *meglis*, or council, at present. They were independent of the royal service, they judged suits relating to contracts, the division of property, wills, and sales (the present *qadi* court). They issued orders, to be countersigned by the Director of the South, and administered by royal officials. They settled the *corvée* and local taxation. They had thus the regulation of local assessment, levied on them in blocks by the king. It seems that they were co-opted. There were thus two systems interlocking : locally, the landowners in council and their chief of the nome ; centrally, the vezier and his corner-men observing affairs, and with the execution of the local acts in their own hands.

As regards the class of people engaged in these duties, it is considered that there was an increasing body of officials drawn from the lower middle class, and becoming hereditary, during the Middle Kingdom. While in the New Kingdom

the lower officials came from the old official families, the increasing number of upper officials were the hangers-on of the nobility. Thus the old feudal nobility were gradually merged into royal officials, and the local government lost its power.

All through the history there was a free rising of ability from the lower levels, as we see in England—Wolsey, the butcher's son, and many others. Several autobiographies state that the great man was of low origin, whose fathers were not recorded, as even the celebrated Senmut. This was a chief cause of the durability of Egyptian society; great as the differences were, there was a gradation interlocking all through, as in England.

The extent of subdivision of the country varied according to the density of the population. In the earliest prehistoric stage that we can trace, the cities which made the corn Osiris figures are four in Upper Egypt and nine in the Delta. In the earliest kingdom, the greater relics of Osiris sanctified seven cities in Upper Egypt and ten below. In the Old Kingdom there were thirteen and twelve nomes. In the Middle Kingdom the full standard list of twenty-two and nineteen was reached. In the New Kingdom they were subdivided into forty-two and twenty-five. By Roman times there were twenty-two in Upper

Egypt and thirty-five in the Delta. The modern *mudiriyehs* have gone back to the early large divisions, seven and seven.

The Ptolemies made as few changes as might be, and we can see the old offices continuing under Greek names. In the Roman administration the great change was the absence of the king, while the temporary governors were not interested or competent to take up the old royal offices. Egypt was not part of the Roman Empire, but was the personal sovereignty of the emperor, taxed and treated exactly as he chose. The prefect represented the emperor personally; his gold seal bore the double cartouches of the emperor, so that every document sealed was issued as the deed of the emperor. The evils of an absentee landlord are well known, and very few of the emperors ever saw Egypt. Vespasian and Hadrian are the only ones who spent a few months there. Augustus was merely a conqueror, as also Aurelius, and Caracalla a slaughterer. Aurelian, Probus and Diocletian briefly intervened. The only thought was how much corn could be levied for the Roman mob, and how much money for the emperor. The last of the emperors, the shadowy Romulus, seems to have drifted to Egypt as a refugee, and left his seal there at his death.

The prefect appears to have inspected the

country each year, and acted as appeal judge at such visitations. In general, much the same duties came before him as those of the vezier, to whose position he had succeeded. Beneath him were three epistrategoi, who held the same position as the four reporters who had to inform the vezier of the affairs and accounts of their respective provinces. They acted as judges, and supplied the tax lists and census returns. They were Romans, and had to appoint the subordinate officials, who were natives. The local head was the successor of the native nomarch, termed the strategos; but his rule was limited to three years, so as to prevent independent power, and also to get in more from the inevitable purchase of the office. They collected the evidence of cases when visiting round the nome, but were not allowed to act as judges; probably they acted as umpires to settle many things which were not carried to open litigation. Like the old nomarch and the modern *mudir*, they were responsible for the assessments and delivery of taxes. All taxes were receipted, even for the smallest sums, as the ostraka show us. They maintained the irrigation system, and therefore must have levied the *corvée*. They were closely checked by being required to devote their whole time during those years of office, and to have their accounts strictly audited at the end. Each had, moreover, a perpetual

spy upon him in the royal scribe. As far back as the XIIth dynasty we see the royal scribe sitting by the nomarch's scribe, to see how much was due to the king, and this system survived to the end, like having a Treasury clerk in every county council.

The old nomarch families were used for their local knowledge, but degraded by being employed to squeeze the country as finance officers, for the land tax and the trade taxes.

The old registration of private deeds, which was in force at least as early as the XIIth dynasty, and probably long before, was fully kept up; not only all official documents were registered, but every private agreement had to be registered to obtain legal force and serve as future evidence. The charge was only 4*d*. in our money, the price of a pound of iron; and so was much the same as our 6*d*. registration of documents through the post office.

The village officials were as the sheykhs of the present time, a few of the leading men who dealt with the management of affairs. They were responsible for keeping the peace, and for seeing that the taxes were raised. Their wider council of the *saru* seems to have disappeared; it was very likely crushed out by the minute regulation of the Ptolemaic tax-gatherers, who would not wish different villages to compare

conditions. The official work in each village fell on the village scribe, who had to draw up returns for the Government; the registrar of the people, who supplied him with the census material; and the agoronomos, who had not much to do with the market, but was the official registrar of all contracts and business documents.

The police of the country were separate from the local system, as they are at present. In the XIIth dynasty we find an overseer of the *khutu*, or "protectors," attached to the nomarch, and in Roman times there were two eirenarchs for a nome. Under them the village police had to keep the peace and bring up offenders, while the village guards did the rough work of handling the accused.

Beside the whole of this general system, various cities which contained a large foreign element had autonomous government, much like the case of Alexandria at present. Probably Naukratis was the first to have this independence, as it was an exclusively Greek city, and appointed its own magistrates. Alexandria was also naturally an independent city, as it was occupied by Greeks and Jews from its foundation. After the Ptolemaic settlement of Greek soldiers in the Fayum, there was founded the city of Ptolemais, with considerable Greek organisation. The Ptolemais further up the Nile had archives and a

senate. Later, Antinoe was entirely Greek in its constitution. By the third century various other places under Greek influence also had senates, such as Oxyrhynkhos and Herakleopolis. The conduct of a local senate has best been recorded at Oxyrhynkhos. It appointed the local officials, arranged the festivals, settled all the Government claims, and the local trade matters. The syndic brought the debates to a head and summed up. It represented the city in all relations with the Central Government. The general impression which this home rule gives is that every one tried to shirk the onerous unpaid duties, and that debates were dilatory and inconclusive, but enlivened by some violence of words if not of deeds.

Taxation is the essential basis of all government. It may be in many different forms. The levy on products, which was the primitive way of supporting a chief, passes gradually into rent in other forms, the latest such change being the Tithe Commutation Act of 1836. A levy on labour is also a very usual primitive form, so many days in the year given to the chief ; this still exists in our upper classes, where onerous duties are levied on justices of the peace and others. The levy by imposing costly burdens was the Greek and Roman system of compulsory officialism at the cost of a private

man for the good of the community, the liturgies of the Greeks, and the public spectacles in Rome. The supply of sufficient silver or gold for currency in a country leads to all taxation being in such currency. Originally a plain poll-tax, this money claim has been adjusted more and more to the details of the payer's life, so that it tends to become so complex as to need a profession to understand it.

The primitive taxation in products and services lasted in full force down to the XVIIIth dynasty, and was never extinguished even in Roman times. In an agricultural society the grant of the use of land is usually from the chief, and is subject to a provision of food-rent, of so many days' maintenance for the chief, or to a fixed return of corn or cattle. This was in full force in the Old Kingdom. On the royal estates the rental had to be paid by all the serfs ; but on the transfer of land to the temples, the royal dues ceased, and the charges became the revenue of the priesthood. These charges, then, may be regarded as the usual form of rent, whoever received it. The charges on products were called *mezedu*, the wringing out as of wine from a press. These were food dues of baskets of vegetables, eatables, bread and fodder ; supplies of material to the registry office, and linen, yarn and cordage ; also taxes of common and precious metals, which

must have been raised by sale of products elsewhere. These prove that we are not dealing here with mere serfs, but with property-owning cultivators. All of these charges continued to late times, so we may take it that they belong to the whole historic period, and probably stretch far back into the prehistoric. The direct claim on labour was for cultivation of royal lands, harvesting, canals and embankments; also for "passage by land and water," or free transit by beast and by boat for the royal service, which has been usual in most countries.

There is no record of revenue in the XIIth dynasty, but in the XVIIIth there is the most valuable list of the tribute of twelve nomes of Upper Egypt in detail ("the reckoning of the reckonings of the office of the vezir"), remaining in the tomb of Rekhmara. Some of the entries are imperfect, the numbers having been lost; in such cases they have been estimated at the average of the entries of the same nature. As the total of this record that remains covers twelve nomes, with some losses, and the whole of the nomes were about forty-one, we may multiply the totals by four to get an idea of the sum of this revenue. This estimated total is what is stated below. What proportion this bore to any other taxation is unknown.

Of gold the greater part came from the south.

The Nubian frontier provided 60 *deben*, the four nomes down to Thebes 64 *deben*, and about twenty-five more in rings and beads; while seven nomes north of Thebes only gave 28 *deben* and two or three in beads. It is clear that the great southern yield was from the gold mines, while gold circulating to the north of Thebes only yielded 4 *deben* per nome, and at that we must rate the other twenty-eight nomes, with some excess for the wealth of Memphis. Thus there was about 300 *deben*, or about £4,000 for the whole country. We may compare this with the captured wealth of other countries; from Syria, the first great raid of Tehutmes brought 1,784 *deben* of gold; the raid on the Khita, 3,200 *deben;* and from Wawat in Nubia, 2,375 *deben*. In all, there was a total of captured gold of 9,000 *deben* or £120,000 in fifty years; so the annual tax of £4,000 yielded more than the raids. Probably a good deal of it was the raided gold which had been put into circulation. In any case, the total was absurdly small as a revenue, and can only have served for central salaries. When gold came into effective use, the revenue was about a thousand times this amount under the Greeks and Arabs. It has been stated that this only represents the vezier's private levy; but on the other hand it seems too large for that. It was probably the administrative revenue for the central office.

Silver was scarcer than gold, though not so much valued; there was only about 60 *deben* in annual tax, and about 3,000 *deben* from raids in Syria. It was of little effect on the revenue or the circulation of values.

Of cattle there were about 200 oxen and 240 calves, but only a dozen cows. This shows that the cattle were not for royal herds but for slaughter, as the use of cows for food was forbidden. As this quantity would only supply an ox or a couple of calves daily, it was merely a domestic food supply, and not revenue for outside purposes. There were also about 2,000 or 3,000 pigeons, only six or eight a day, and so but a small additional supply. No geese are named of any kind, so probably they were not sent about, but only bred locally.

The corn supply was but small, about 1,400 lbs. of wheat, 1,600 lbs. of barley (for beer), and 3,000 lbs. of durrah, 6,000 lbs. in all, or 16 lbs. a day, with some twenty loaves of bread daily. This would not keep more than a dozen or twenty people. Probably these amounts were only for local officials, whose receipts would be accepted as tribute supplied. There was a small amount of bread made from the pulp of the dūm-nut.

Strangely, there is no mention of dates in the list, but in the pictures the frontier and Den-

derah region supply some bags corded up as dates are now packed, and so these may be taken to be such. The amount is trifling ; probably palm groves on the royal estates supplied all that were needed. There seem to have been about sixty jars of honey, and as this was the only form of sugar for sweetmeats and sweetening wine, it would barely be enough for an establishment. This sums up the whole of the food supplies and precious metal, and there was clearly no excess beyond what was needed for consumption at the official centre of administration, which also required additions from royal estates. There is no record of similar levies for the king, beyond the old requirements of taxes in kind on cattle and produce. The raids abroad only provided the gold and silver used in decoration and vessels for palaces and temples. There never was any support of the country bureaucracy from a central fund. All that was levied was merely for central offices, and not what we could class as general revenue. The main cost—that of the army—was supplied entirely locally. It was divided into four bodies, that of Amen from the Thebaid, of Ptah from Memphis, of Ra from the south of the Delta, and of Sutekh from the northern Delta. Doubtless it was the duty of the local authorities to find not only the soldiers, but also their supplies.

In the New Kingdom, the Government strove to improve the position of the country and increase its wealth. The much closer subdivision of the nomes suggests how much more detailed attention was being given to the administration. All land, except that held by the priests, was assessed annually for taxation, varying according to the height of the Nile and the amount of crop which could be raised. This regulation of dues by the extent of inundation dates from the Ist dynasty, if not earlier, as the height is minutely recorded to a sixteenth of an inch for every year in the national annals. This certainly would not be done without a serious purpose. Not only land was registered but estates, and the number of persons living on each holding. The taxes were, of course, in kind, and amounted to a fifth of the produce. As we have seen, these were not centralised, but were retained locally to pay the administration and the army. There was also a sort of professional income tax paid by officials, entirely in the hands of the vezier; this tax was remitted by Heremheb, apparently to gain the support of the civil service and weaken the position of the vezier, whom he may have thought dangerous, after the feebleness and confusion of the Aten party. It would not, in the long run, render the bureaucracy more powerful, as it could be taken

out of their pay. It seems to have been an ingenious way of transferring this hold from the vezier to the king by indirect shuffling.

The assessment was settled by the royal inspectors of the palace, who valued land and property and fixed the amount of tax.

The current hold on the working of the taxes was kept by a monthly report of all receipts and outgoings sent in to the vezier by all local officials, along with reports of the state of the Nile as a guide to future taxation. Thus the available ways and means were kept in view as a continuous balance sheet, and any intended expenditure could be arranged from the nearest Government stores.

Whatever invaders entered the land came to make it their centre of government, the Berbers of the XVIIth—XVIIIth dynasties, the Bubastites of the XXIInd, and the Ethiopians, who, though continuing at Napata, made a separate Crown-prince Government of the XXVth dynasty in Egypt. The first power to lay a tax on the country as a drain of capital sent abroad was the Persian Empire, which levied 700 talents of silver, about £160,000 yearly. This was a very light impost for such a country, but yet far more than the vezier raised, and it all went abroad, so that it did not return as payment for services rendered. This shows, however, that

there was no large royal taxation before this, or the same would have been kept up for tribute.

Under the Ptolemies there was a much heavier taxation. The only record of the amount is at the end, when the country was not so flourishing, but even then, under Auletes, the revenue was 12,500 talents, or 3 millions sterling; and Strabo considered that under the Roman management the country was much more wealthy and yielded more revenue.

The Ptolemaic revenue was raised in a most inquisitorial manner, which must have required an army of useless mouths to carry out the inspection. From the revenue papyrus of Philadelphos, dealing solely with the oil tax, we see how many regulations were needful for domestic taxation. The inspectors searched the kitchens to see that free dripping was not used in place of the taxed oil. When they came to such detail for only one of the taxes, we may imagine the worry of search about all the other taxes.

The land tax varied, of course, according to the tenure. The priestly lands were free; those held by yeomen farmers were taxed a fifth of the produce; those belonging to the king as royal estate paid rent on a larger scale; and the serfs had to yield the greater part of the crops which they raised, whether to farmers or the

temples, or the king, whoever owned the land and the labourers.

The animals were taxed from very early times, as the IInd dynasty instituted a biennial census of cattle, evidently to ensure getting in the full amount. At the present day, when the cattle census is taken, it is surprising to see the higher desert dotted over with animals driven up there to escape the registration. In the XIIth dynasty the cattle census was annual, and the Prince of Beni Hasan raised 3,000 oxen annually as tax from his nome for Government purposes. The fisheries were also taxed, but we only have the record of this in the Persian times when the Bahr Yusuf fishery, on entering the Fayum, yielded a talent of silver daily for six months, and a third of that during the rest of the year, or 240 talents a year. This amount seems incredible, and could only be achieved by a very close prohibition of fishing along the course of the canal, in order to collect the whole tax at one place.

The Roman control of taxing was solely to raise as much as possible from the country for the absent emperor. Within two centuries it greatly impoverished the country, and produced the revolt of the Bucolic war. The drain went on till even the most debased currency ceased and barter set in ; finally, in a state of utter collapse,

the country welcomed the Arab invaders to escape from the Byzantine tax-gatherers. The total to be levied was settled, year by year, by the emperor, who was a stranger to the land. His order to the prefect was passed to the three epistrategoi, and by them to the temporary nomarchs, the strategoi. They divided the assessment among the villages. The main tax was the supply of corn for Rome, all the cost of which, up to delivery in Alexandria, had to be paid by the village which supplied it. Land not under corn had to pay a money tax on vineyards, fig-groves, palm-groves, olive-yards, and whatever else the land produced. House taxes were collected by the same authorities.

Another control was brought from Rome; the business of the imperial steward, or idiologos, was to look after the interests of the emperor, and see that there was no weakening on the part of the administration. The prefect had many other matters to manage, and might let other considerations of the peace or condition of the country influence the claim for tax; but the idiologos (who was independently appointed) was there for money and money only, and knew no other consideration. Finally, under the reform of Diocletian, all tax business was taken out of the control of the prefect, and worked solely by the catholicus, a new name for the idiologos,

entirely independent of the civil administration. The domain lands, private property of the emperor, and lands mortgaged for debt to the State, as well as unclaimed land, were all managed by the idiologos, by means of a dioiketes, and under him epitropoi or procurators. These lands might be sold off at any time, like the sales of the *daira* estates of the Khedive. Quarries and mines belonged also to the imperial property, and were generally worked by the State, convicts being employed under guard, as at present on the basalt quarry of Abu Zabel, north of Cairo.

A change was made regarding the immunity of temple property from taxation. Probably it was found that private property was escaping tax by some arrangement with the temple administration. So all temple property was uniformly taxed like the rest of the country, and, in return, a definite grant was made toward the maintenance of the temples. This also had the effect of rendering the priesthood subservient to the Government which paid them, and also interested in its maintenance and solvency.

There were taxes on the river traffic, on all that went up the Nile at Schedia, north of Alexandria, and on the products of the south where they passed Hermopolis. These are much like the Khedivial river tolls at the railway bridges, which were put on to drive trade to the railways.

Goods brought in from the Red Sea were met by a duty at the entry on the Nile valley. The tariff of Koptos has been preserved, and shows that the tax was farmed out here, and needed to be placed on public record to prevent extortion. The dues were mainly personal, on Red Sea sailors, and on women, mostly only a few shillings, and trivial taxes on conveyance. There may have been another tariff on goods, as the present tariff only concerns traffic on the road.

There was a personal tax on all Egyptians between the ages of fourteen and sixty ; exception was granted to Romans, to Alexandrians as being a stage toward Roman citizenship, and to some privileged classes, such as the descendants of the veteran Greek settlers, and some priests at each temple. Besides this poll-tax, there was from time to time a special " benevolence," called a stepkanikon or " crown," originally a contribution for a golden wreath presented on the accession of a ruler, but long ago degraded to a tax, like the " first-fruits " tax on all entrants on a church endowment.

Trades were subject to an income tax, which was reckoned on the monthly receipts ; thus it was a tax on business, irrespective of the amount of profit. Probably this favoured the growth of barter which could not be taxed, and which superseded the utterly debased currency. There

was also a tax of one-tenth on sales of property, of one-twentieth on inheritance and on manumission of slaves, and a minute charge of six-thousandths for registration of legal documents. The penalties for non-fulfilment of contract did not go to the injured party, but were taken by the Treasury. This would probably lead to a composition between the parties before going to judgment.

The difficulty of getting all these taxes led to the abuse of farming out the taxes, which was the Ptolemaic system, pitting local knowledge of people against inevitable evasions. The system was convenient to the Government, but led to terrible abuses, as the personal interest of the tax farmer, backed by legal force, was too drastic and insistent.

CHAPTER III

RIGHTS AND WRONGS

The great exposition of Egyptian ideas of conduct is the repudiation of sins, to be made in the final judgment. This is embodied in the so-called CXXVth chapter of the so-called "Book of the Dead," and it is extraordinarily misnamed the "Negative Confession." These terms must be given as landmarks, but the "Book of coming forth to the Day" of future bliss, has no numbered chapters, and is not in any uniform order. It is a collection of spells put together, as material or preference led each scribe.

This repudiation, or declaration of innocence, has suffered by its editors. One writer rearranges the sections according to his own views, omitting all that he cannot render as sense; another writer keeps the order, but omits what he will not risk translating. We must take the whole text, and see what is its structure.

The various declarations appear to fall naturally into groups of five; this suggests that they were so arranged in order to learn them with finger counting, as a clue to memory. If so,

they would be a part of the usual education taught by the priests. There is a parallel in the mechanical device of the Welsh Triads as an aid to memory, doubtless used in teaching morals and history thus embodied. In three entries below there seems to be an exception to this regular numbering, but they are only duplications of expression, and not fresh ideas.

General character.

1. I have not done injury to mankind.
2. made wretched the cattle.
3. done sin in place of righteousness.
4. known evil, nor done wickedly.
5. done upon each day services ahead of my duty.

Honourable dealing.

6. My name has not come to the boat of the chief (of the family).
7. I have not cursed God.
8. caused misery, nor have I caused poverty.
9. done what is abominable to God.
10. made deaf a servant toward his chief.

Avoidance of violence.

11. I have not caused illness.
12. made to weep.
13. killed.
14. given order to cause killing.
15. made deprivation to mankind.

Religious obligations.

16. I have not lessened the bread offerings in the temples.
17. ravaged the cakes of the gods.
18. carried off the bread of the glorious dead.
19. cohabited
20. defiled myself } in the temenos of the God of my city.

Commercial honesty.

21. I have not lessened the corn measure.
22. lessened the palm.
23. deceived in the fields.
24. added to the weight of the balance.
25. made poorer by means of the plummet of the balance.

Respect for rights.

26. I have not carried off milk from the mouth of a babe.

27. I have not driven away cattle which were on their pastures.
28. netted birds of the records of the gods.
29. caught fishes in their pools.

Not hindering the course of affairs.

30. I have not turned back water in its season, nor divided by a dam at running water.
31. extinguished flame in its minute.
32. transgressed the days for the chosen meats.
33. turned back the cattle or divine things.
34. repulsed God in his comings forth.

Of these, 4, 8 and 30 have duplications of the same idea ; otherwise the order of fives is regular, excepting the loss of one of the observances of rights. No. 5 has been a difficulty, omitted by translators ; it seems to refer to misplaced zeal and officiousness. No. 6, often omitted, may refer to complaints not being made to the chief. No. 10 seems to refer to causing insubordination. Nos. 19, 20 repudiate the customs of Syrian temples, which were, even recently, con-

tinued at Jerusalem. Herodotos (ii. 64) refers to this Egyptian law. The cheating in measures implies giving out corn (21) or stuff (22), cheating in boundaries and assessment (23), and receiving goods weighed (24–5). No. 28 has been a difficulty; as it refers to rights, it may be rendered as poaching birds on property recorded in the Annals as a gift to the gods; and No. 29 refers to the pools of the gods just named. In No. 30 there is mere duplication, as turning back water is by damming it. No. 31 refers to the time of a hippopotamus putting its head up to breathe, say a minute.

Following this is another highly theological version, which is obviously an artificial compilation. But the seven classes of moralities stated above may well have been a regular code. The Decalogue of Exodus also suggests a finger-counting mode of memory.

Another wide view of conduct is given in the maxims of Ptah-hetep, composed in the Vth dynasty. These are not concerned with abstract right so much as with the give and take of daily intercourse; there is nothing that can be considered as a moral command, like the subjects classed above. These maxims sometimes rise above mere policy to an ethical point of view. "Do not wrap up thy heart in riches that have come by the gift of God." "If thou

desirest thy procedure to be good, take thyself from all evil, beware of any covetous aim." "Let not thy heart swell because of thy knowledge; converse with the ignorant as with the learned; the boundary of skill is not attainable, there is no expert who is completely provided with what is profitable to him."

The sense of abstract truth was an important standpoint, as shown by the frequency of priesthoods of the goddess Maot, more usual than those of Ptah or Neit. This adoration of Truth, who was never addressed, like other deities, to give funeral blessings, shows what a hold the ideal of truth had on the Egyptian mind. This readily linked with the longing for union with the gods, which we find in the most primitive inscriptions. Hence came the aspiration to please the gods, and gain their favour by right conduct, and therefore the conception of felicity after death being dependent upon the earthly life and its deeds. This, in turn, led to the perception that the deeds would need to be appraised to decide if men merited companionship with the gods, and from this arose the judgment of the earthly life before Osiris. There the deceased addressed the gods with Osiris, "Salutations to you Lords of righteousness, the company behind Osiris, causing to cut away sins, behold ye me, I come to you, extinguish all sins belonging to me"

(B.D., xvii., 84). Here there was not only a plea of personal right conduct, but further, a prayer to be purged of evil; a recognition that man could not depend on his own merits, but needed divine purification. This was a great advance in self-judgment, though not reaching the perception that the Indian attained. There was also a custom of purifying the dead by the removal of all decaying matter and cleaning the skeleton before recomposing it, in the prehistoric times; in Roman times the intestines were removed with a declaration that they alone had caused wrong, and were thrown away as a sin-offering. This was another manifestation of the moral sense of needing purgation from sin.

In practical life, the Egyptian felt very strongly the value of strength of character and of self-control. He taught that there would be no room for deviation and uncertainty if a resolute course be firmly adopted. The steadfast, unwavering mind is held up as a heavenly requisite, "I have not given way to anxious care," "I am not of inconstant mind." Discretion and quietness were also greatly enjoined. When any opponent was foolish or noisy, the right course was to be quiet and to overlook absurdities and trifles.

In dealing with equals, cheating and falsehood are strongly repudiated; faults should be overlooked, oppression and stinginess should be

avoided, needless suffering should not be allowed, because it was unpleasant to see as well as to feel. Friendship was looked on as useful, but without any enthusiasm or devotion. Haughtiness was to be eschewed, and geniality cultivated in social intercourse.

To superiors, ready submission was commended; and the influences of backstairs and toadying were not to be omitted. To inferiors, fairness and kindness were enjoined; past favours should not be harped upon. Pride, grasping and browbeating are all condemned. "Speak not too much, for men are deaf to the man of many words; be silent rather, then shalt thou please, therefore speak not. Before all things guard thy speech, for a man's ruin is in his tongue."

Though urging strongly the need of diligence and work, the claims of life in general were not to be crushed. "He who doth accounts all day long hath not a pleasant moment; and yet he who enjoyeth himself all day long does not provide for his house. The archer hitteth his mark and so doth he who steereth, by letting it alone at one time and pulling at another. He that obeyeth his heart shall command." "Diminish not the time of following the heart, for that is abomination to the *ka* that its moment (of action) should be disregarded. Spend not the time of

each day beyond what is needful for providing for thy house. When possessions are obtained follow the heart, for possessions are not made of full use if weary." Here the use of wealth is set out simply as a means of enjoyment, and there is little sense of duties to others, beyond free hospitality.

It is remarkable that in the earlier repudiation there is no mention of family duties or claims; and the only reference to marriage is that it should not intrude upon religion. In the later list of wrongs, the sexual evils are condemned; but in the early list it seems as if the members of a family had no more claims or duties to each other than to any one else outside. In no age is there any allusion to obligations to brothers or cousins; the family tie never seems to have been at all what it was in more northern countries. In the direct line, however, the claims and affection between children and parents were very strong.

The institution of marriage was still in progress when written records begin. Some of the stages which can be traced are embedded in later writings, but are clearly archaisms. The repudiation of sins seems the earliest, as that gives no hint of permanent marriage; and the only connection with it is in the refusal to mix licence with religion, a mixture which pervaded most Asiatic worships. As late as the XIXth

dynasty there was still surviving the idea that a man was only a boarder in a woman's house. "Be not rude to a woman in her house if thou know her thoroughly. Do not say 'What is that? Bring it to me,' when she hath put it in its right place, and thine eye hath seen it; when thou art silent, thou knowest her qualities, and it is a joy for thy hand to be with her." The fixity of marriage is assumed in the early tale of the magic crocodile; yet the wife's *tête-à-tête* in a garden with a page is treated rather casually, though afterwards matrimony is avenged by burning the wife. In the Vth dynasty maxims, it is assumed as a natural matter that a householder might have irregular connections, and a woman in that ambiguous position should not be treated harshly but helped. The later, priestly, version of the repudiation of sins strongly asserts the marriage law. Yet throughout history, down to later times, the descent was traced farther back on the mother's side than on the father's; the maternal uncle is also important in the family. All fixed property was in women's hands, and where a man leaves a house to his brother (which he may have bought), the brother at once passes it to his wife, with remainder to their children at her discretion. The patriarchal system seems to have gained ground in the Semitic influence of the

XIXth dynasty, yet the woman's hold on property continued much later. It is seen at present among the Sinai Bedawyn, where the woman owns the tent and the flocks, and all the silver coin is on her veil, while the man wanders about with a camel and sleeps under the rock shelters. Men never live in a tent in Sinai.

There was a strong moral sense of the duty of protection and good management by the ruling class. In funeral inscriptions men often claim consideration for their good deeds. "I gave bread to the hungry and clothes to the naked, and gave a passage in my own boat to those who could not cross. I was a father to the orphan, a husband to the widow, a protection from the wind to the shivering; I am one who spake what was good, and related what was good. I acquired my possessions in a just manner." Another noble relates, "When there was a deficient Nile for twenty-five years, not allowing my nome to be irrigated, I gave to it southern corn and spelt, not allowing misery to take place in it, until there came abundant Niles. I fed the children with my hands, and I anointed the widows. There was not a poor man wretched in my time. I strove to make myself beloved that my name should be good, and that my claim should be justified in Kher-neter." This shows the religious motive of pleasing the gods, as at least an avowed reason of action.

The sense of justice was strong, the word *maot* meaning not only truth in the abstract but practical justice. Not only the dry abstract recognition of right was expected in the Vth dynasty, but the living sympathy which would make it effective. "If thou art an adviser be pleased to hear the speech of a petitioner, let him not hesitate to empty himself of what he hath purposed to tell thee; love beareth away falsification, let his heart be washed until that is accomplished for which he hath come. . . . It is good breeding to hear graciously." Nothing secures a better hold on the modern Egyptian than being minutely just; it brings out an equal response of honesty. As a native said, "You are as exact as a gold-balance."

In the XVIIIth dynasty the exhortation of the king to the veziers when they were installed was to impress strict justice. They were to be not mild but severe in their orders; not to be partial to the rich, "for every man is as every man." Partiality, or "leaning to one side, is an abomination to the gods."

The devotion to truth came to be the motto of the great idealist Akhenaten, who added to his name "Living in Truth."

In Ptolemaic times, as Diodoros says, "They were extraordinarily careful concerning their courts of justice, for they looked upon just

sentences and decrees, pronounced from the seats of justice on both sides to be of great weight and moment to the advancement of the public good. For they knew very well that men's miscarriages would be best reformed if offenders were duly punished, and the injured and oppressed relieved; and, on the contrary, they foresaw, that if the punishment due by the law to malefactors could be bought off for money, favour, or affection, then nothing but disorder and confusion would enter into all orders and societies of men."

For the laws, we have, unhappily, no direct evidence, except of late times. Clement mentions eight books of the laws, now entirely lost; in the XVIIIth dynasty there are figured in the scene of a law court four tables, each with ten rolls upon it. It is evident that the law was well codified, and not like the barbarous simplicity of the Twelve Tables, modified by the annual variations of the Prætor's edict.

Property laws are ascribed to Bocchoris (Bak-en-renf, 720 B.C.). A lender who could not produce a written bond for the value lost all claim. Borrowing with written contract was limited by the interest not being allowed to exceed the capital lent. Enforced payment could only be by distraint, and imprisonment for debt was forbidden. The penalty for delay in repayment was heavy; on a loan of 6 ounces of

silver for seven months a house was pledged as security, and, if repayment was not complete a month after date, a fine of one and a half times the outstanding amount was levied.

There was, in the time of Akhenaten, an international property law; the King of Alashiya asks to have the property of one of his subjects, who had died in Egypt, returned for the benefit of the family.

In the XXVIth dynasty, Amasis made a law that every man must annually make a declaration of his means of subsistence; unless this were satisfactorily done, he could be executed.

Various obligations were carefully made legal. In the XXVIth dynasty, when a man fell hopelessly into debt—for cost of an illness or otherwise—he might contract to be a permanent slave of the creditor, together with his children, present and future; his wife is not named. The purchase of annuities was also a custom, as shown by a deed of the time of Alexander.

The earliest will is of the XIIth dynasty, and evidently part of a well-settled system, with due official registration; we shall deal with this under domestic life. There is then a long silence until the wills of the Greek veterans under Ptolemy III. In these it is usual to appoint the king as executor, that is, the king's law court. The testator is fully described, as " in his sound

mind and right understanding, a sojourner about eighty years old, short in stature, with aquiline nose and bright eyes, curly hair, but rather bald, with long ears." Four witnesses to the will are likewise described. He simply bequeathed all his goods "to Axiothea daughter of Dizoulos the Thracian woman, and I leave nothing to anybody else." She is not said to be his wife.

Land laws were framed very early, arising out of the necessary customs of the primitive agriculturalists. The chief was the landlord of the tribe, and had to grant lands to each holder, which doubtless reverted in case of there being no heirs. There does not appear any trace of compulsory return after certain lives or years. In the IIIrd dynasty, there is a recital of eight properties acquired in different ways by Meten, a very high official. The different titles to these properties are (1) a royal concession, perhaps to revert; (2) a gift by the father; (3) an acquisition by royal deed, apparently hereditary and alienable; (4) a royal concession, as (1); (5) an acquisition of right under obligatory covenants; (6) a gift from the mother; (7) a deed from the mother for the children, in trust; (8) a gift by the man to his own children. These imply at least four differing kinds of tenure.

In order to hold land by gift, inheritance, or purchase, it was needful to be identified on the

land register, and then to pay the tax on transfer, without which the property was lost. This constituted legal proof of ownership. The gift of all the river frontage of Memphis to Ptah, by Apries, raises the question which looms earlier, what was a gift? It is unlikely that every one on that land, so commercially valuable, was a serf; it looks as if it were a grant of the land tax or of the landlord rent, which had belonged to the king. It is expressly said that the inhabitants shall not be removed, even by royal messengers, so there was no expropriation, and therefore the sitting tenants were not affected. It seems, then, that it was a gift of rental or tax.

From Roman times there are many leases of land, still preserved on papyri. There are two kinds of rent, either by a fixed value or by the *metayer* system of a share of produce. The fixed rent was from 1 to $7\frac{1}{2}$ bushels per acre, average 3·8; the produce rent was from a half to four-fifths, average two-thirds of the yield. As the English yield is 30 bushels an acre, and we can hardly suppose the Egyptian climate and watering to yield much less, the average rent was but one-eighth of the produce, or say one-fifth of the *metayer* share. These two forms of rent must belong to very different tenures. One reconciliation would be to suppose the yield only half that of England, so the *metayer* part = 10 bushels an

acre, and if this rent had to supply the Roman tribute, averaging $4\frac{2}{3}$ bushels an acre, that would leave $5\frac{1}{3}$ bushels as the equivalent of about 4 bushels of fixed rental. Otherwise we must suppose that the rent value is merely a land tax on freehold, and the *metayer* share is the landlord's rent on a tenancy.

In several places there was a system of the village owning public lands, the rental of which sufficed to pay all external taxes on the village, public and private.

The regulations of the official world were very formal and precise. In the tale of Sanehat, the goodwill of the king to him has to be celebrated by a chorus of the princesses singing adulation. The "customs of the palace and maxims of the court" had to be carefully observed when courtiers were introduced to "ascend to the king." Still more care was needful over countrymen and foreigners, and the master of the ceremonies was proud of his ability to "range the princes in their places." Akhenaten with his "living in truth" wiped out a great deal of formality; the people might come and dance before him, as he looked from his balcony and showered flowers down to them.

The bureaucracy seems to have been eaten up with petty jealousies, showing that they were over-staffed, and had not enough hard

work. The access to the king, the retention of every official detail of routine, and the relations with other departments formed the basis of anxious intrigue.

In Roman times the foreign officials soon began to claim too much, and as early as A.D. 47 the prefect Capito had to issue a severe ordinance on the matter. He had heard long before, and again lately, that in Libya officials had been seizing things, under pretence of necessity, and as due for expenses, which was neither true nor admissible. Therefore, he commanded all ranks to take nothing, nor exact couriers' privileges, without a special warrant, and that only for lodging. Further, if anything is given or exacted for the public service, the prefect will fine him ten times the amount, and give four times the amount to the informer in addition. The royal scribes and others shall keep a register of all nome expenses, and any irregularity discovered shall be repaid sixty-fold.

Regarding Punishments, the Egyptians were, in general, mild compared with most other races. In the Vth dynasty we find a woman's adultery punished by burning before the harem, and scattering the ashes in the river. But we do not meet with this penalty again until Roman times, when it was used in persecutions and afterwards (Ammianus, XXIV., v., 4). In the

Middle Kingdom the deposition of a nomarch has happily been preserved. The nomarch had harboured enemies of the king in the temple, probably agents of a rival dynasty. The penalty is that he shall no longer share in the endowments, his documents are to be destroyed in the temple and in the Government office. Curses are pronounced on any ruler who may forgive him, and confiscation on any subordinate who pleads for him; and he is deposed. Yet there is no physical penalty in life or estate against the man.

In the XVIIIth dynasty, Amenhetep, son of Hapi, grandly curses those who transgress the laws; but it seems to be all imprecation and not physical penalty actually inflicted. "Honourable men shall not enter their house," a mere social penalty, which does not imply privation. In the great court conspiracy of the XXth dynasty, most of the guilty were condemned to death, and allowed to commit suicide. Others, who had been their boon companions, but taken no actual share in conspiracy, lost their noses and ears.

The Ethiopian rule was mild. Pankhy, when suppressing the rebellion in Egypt, killed no one in cold blood—even the leader came in peaceably at last. Shabaka is said by Herodotos not to have put any Egyptians to death for any crime, only condemning them to hard labour on earth-works. Similarly, Bakenranf is stated by

Diodoros to have commuted the death penalty to hard labour in iron fetters, working on canals.

In the Roman age, the great penalty was to be driven remorselessly to labour in the gold mines far in the desert, whence escape was impossible for lack of water. The prisoners were chained by the legs, and lashed continually to the work day and night till they died of disease and exhaustion.

Accidental manslaughter was thought worthy of death, but was compassionately punished with three years' banishment. The penalties inflicted in the persecutions belong to the general anti-Christian system throughout the empire.

An Egyptian nowadays will say about some scoundrel, "Would it not be good to put him and his family all together, and pour petroleum over them and burn them up." This old penalty is still an ideal to the Muslim mind.

The procedure of law in different ages does not seem to have varied much, but we have not sufficient material of any one kind to make comparisons between periods. All we can do here is to outline what we know of each period.

In the Old Kingdom there appear to have been two centres of justice, the six courts of the north and the court of thirty great ones of the south. Only once does an official belong to both courts. That these were separate courts is indicated by

the titles. There are nine chiefs known of the six courts, and twenty-five great ones of the south, along with other titles.

Nine Chiefs of Six Courts.		Twenty-five Great Ones of South.
8	vezier, chief justice	5
3	next under the king	13
1	chief of secrets of king	8
1	judge, *onz mer*	13
1	*an-mutek*	10

It is evident, then, that the general official position of these two titles was very different. The only time they are held together is by an extreme pluralist with forty-two titles. The vezier was almost always over the six courts, only one in five was an *ur*. On the other hand, the royal deputy was often appointed in the south, but seldom held the six courts. The disparity in the other titles is still greater.

The chief judge (*sebekhti*) was the vezier from the IIIrd dynasty onward; he was always from a great family, if not royal, and held the high-priesthoods or other important positions. His office was the great *khă* hall, with open end, and two rows of columns along it, the "shady place" originally. In the XVIIIth dynasty it is more fully shown in the tomb of Rekh-ma-ra. The *khă* was the registry in which all the registers of land and property were kept, ready for reference

when any case required them. All wills were filed there, boundary records, assessments, and every kind of official evidence. All petitions for justice had to be entered at that court, and were thence devolved on the suitable judge. Naturally such a mass of material and business would soon be congested, so the south and north were separated, and probably all but very important cases were dealt with in the nome court. Similarly, the Chief Justice in England has devolved all minor matters on county courts and borough magistrates.

In the New Kingdom, the devolution of justice locally was entrusted to a court of the officials of the district, the " great men of the town," who acted for the High Court. For cases of landed property, a deputy of the High Court was sent to act with the local council. The High Court or " Great House " was a permanent assembly of the highest officials, a Cabinet in modern terms. In the *Tau* court of justice the composition varied according to the nature of the case, as a modern jury varies according to the condition of the litigants. The scribe of the court was permanent, and kept the procedure regular. In this court it does not seem that the pleas were in writing, but the two parties were heard orally. After the sentence the successful party demanded the award of the court from the other. The

system remained in the primitive condition of personal action ; in no case do we find a class of advocates or barristers, or the Roman patron and client. Looking at the high repute that Egyptian law had for justice, it would be interesting to see the effect in modern times of abolishing most of that class who live by fomenting discords in Egypt and in India. The record that was drawn up recited the speech of plaintiff and of defendant, the verdict of the court, and the list of names of the judges and scribe. The officials forming the court had other duties, and were not professional lawyers, for educated Egyptians had sufficient knowledge of the law to judge. In these conditions the scribe of the court must have been the guide to the legal details, and as important as a magistrate's clerk of the court is at present, or the " recorder " of a city.

In the XXth dynasty there was no prejudice against foreigners acting as judges, and, in one case, four out of fourteen judges were foreign ; this was due to the great importation of foreign slaves, who rose to power like the insolent freedmen of the emperors.

The most complete record that we have of a trial is that of the tomb robbers in the XXth dynasty. This was largely an affair of personal intrigue between the mayors on the east and

the west banks of Thebes. The report of the robberies made the vezier and the royal scribe at once go across the river to inspect the tombs in question, and see their condition. This immediate search, personally, by the chief justice, cleared up the matter, and proved that most of the accusation was a spiteful exaggeration, only one instead of ten royal tombs having been robbed.

The priestly dominion of the XXIst dynasty encouraged the consultation of oracles. Two tablets with the two different verdicts were placed before the statue of Amen by the high priest, who then prayed the god to give judgment, which was done by an indication of the chosen reply. This was repeated twice. How such indication was given is not stated. The phrase occurs " the god saluted violently," and Maspero considered that the statue had movable arms or head worked by the priests. This seems too crude, and some form of planchette writing, unconsciously acted on, seems more likely. Another form of oracle, as in a land dispute, was by carrying out the bark of the god on the shoulders of priests, and when it seemed heavy the position gave the answer. Such oracular heaviness is believed at present in Egypt, and it was accepted in Sparta (A.E. 1921, 76–8). The priesthood resorted to oracle for establishing all their position, and even the wills

and conveyance of property are issued as oracles and divine decrees.

In the Roman age, the prefect did not inherit the judicial function of the vezier, for that was given to a colleague, the dikaidotes, who went with the vezier on circuit. He acted as judge in the greater cases reported by lower magistrates. He was appointed by the emperor, and was usually a Roman knight, thus the old veziership was divided. In the Greek city of Alexandria there was an archidikastes, who could act in other parts of the country, mainly for the cases which involved the Alexandrian register of deeds. It was a Ptolemaic office, doubtless part of the original constitution of the city; the option of referring cases to him, from other parts of the country, probably arose from his judging Greek citizens wherever they lived, much like the consular courts dealing with foreign residents now.

For lesser matters the strategoi, successors to the nomarchs, heard cases; and the centurions had the same powers, as well as that of ordering the summary arrest of offenders.

In the case of extortion and abuses having occurred, a proclamation was put out that, for four months, claims would be heard by a freedman of Caesar, an officer of the tribunal of accounts, and by the controllers; if anything was

judged to have been unjust, the prefect would put it in order.

The procedure in a case of assault and defamation is preserved. A petition was sent up to the king's court of justice demanding the appointment of a jury, either party having the right of challenge of jurors, but no substitute being entered. The legal ten were thus reduced to eight, one of whom was the foreman. The parties had the choice of different procedures or codes ; the plaintiff not appearing, the defendant put in her scheme to the court, that the case should be decided (1) in accord with the royal scheme of law ; (2) in matters outside of that, in accord with the city laws, and (3) in all other matters in accord with the strictest justice. The case was only about a trifling assault and squabbles, which the plaintiff did not care to pursue, and yet reference was made to the royal courts for a jury. It seems to show that the local courts had very slight jurisdiction.

There was a large branch of law dealing with the religious endowments, the *waqf* of modern times. The endowments for funeral offerings being managed by the *henu ka*, "servants of the ka," needed close regulation to prevent malversation. In the time of Khofra, of the IVth dynasty, the regulation of one endowment provided :

(1) The donation to the *ka* priests for service, not to be alienated.

(2) Prohibition to divert the endowment by sale or deed, except for hereditary succession of the service.

(3) Penalty and ejection for a priest who discontinues the service.

(4) Any priest calumniating or intriguing against another loses his office, which passes to the corporation or to another priest. The reference of the case to the Notables is prohibited. [This is the beginning of a code of Canon Law.]

(5) A priest may only plead before Notables against those outside of his corporation; his endowment is not liable in external actions.

(6) The endowment is a royal gift.

(7) Any rights of third parties in the property of the endowment are to be defined by a tribunal of the priests of Osiris. Of the clear revenue, one-tenth is for the priests and nine-tenths for the offerings.

(8) The inventory of property of the endowment.

(9) Inventory of priestly property.

Thus all alienation was guarded against, and the final inventories left no doubt as to the ownership. It would be interesting to know how long this house of cards lasted.

Another large class of documents, mostly of the

VIth dynasty, are the royal decrees granting property or immunities to the temple service. To ensure the permanence and acquaintance with these charters, they were engraved on slabs which were set up in the entrance to the temples, so that every one might know them. This was a far better system than locking up charters in a cathedral chest.

For the protection of a cemetery a decree of the XIIIth dynasty, by Nefer-hetep, declares that no one may set foot in it; four steles are set up to delimit the ground, and if any craftsman or priest is found within it, he shall be branded. If any official shall place his tomb there, the law shall be executed on him and on the keeper of the cemetery. Any future burials must be in additional ground.

The Criminal law is best recorded by Diodoros, and the provisions of it are probably all of early date. Besides the punishment of rebels or conspirators, which is taken for granted, there are specified:—Perjury, penalty death. Neglect to assist a man when in peril of death, or to discover thieves, punished with scourging and three days' starvation. False accusers, to suffer the same penalty as their victims might have suffered. Murder of freemen or of bond-slaves, penalty death. Parents that killed their children, to be exposed bound to them for three

days and nights. Parricides to be mangled and then burnt alive on thorns; pregnant women to be reprieved until delivery. Giving information to the enemy entailed the loss of the tongue. Those who made false weights, seals, money and deeds, or erased public records, were to lose both hands. For rape they lost the genetalia. For adultery, a thousand lashes to the man and loss of nose to the woman. The sheykh of the thieves, to whom all stolen property was taken, was an institution, as until recent times; the owners could reclaim goods on paying a quarter of the value. This deterred thieves, as if they did not accept the quarter of the value, they had the body of thieves against them for not handing up the stolen goods.

After the weakening of the country in the period after Akhenaten, the soldiers were out of hand, and Heremheb had to enact severe laws in order to bring back peace and order. These enactments were against robbing the poor for the royal breweries and kitchens; robbing the poor of wood for the king; exacting dues from a poor man; robbing the poor of dues for the harem or the gods; unlawful appropriation of slave service; stealing of hides; connivance of dishonest inspectors with thievish tax-collectors for a share of the booty; stealing vegetables under pretence of collecting taxes, and against corrupt

judges. All of these troubles read very much like the ways of the soldiery under Araby, and sometimes since then.

In the XXIst dynasty a high lady—apparently widowed or deserted—saw some one carry off her children. Her father then went in state to the king and declared his endowment of her with an estate, which apparently put her under royal protection of the courts. She quickly recovered her children, apparently by their being thus made wards of court.

The general morality of the common workmen seems to have been low, as there are frequent complaints of their " assaulting strange women." The gradual growth of the marriage system probably left a large proportion of women below the standard as the moral ideal rose. It is not a thousand years since large parts of Europe had no regular marriage.

Some subjects scarcely come into legal or moral compulsion, but are important as showing the mental attitude. Here we shall notice Humanity, Pessimism, Blessings and Curses.

In the Vth dynasty consideration for others was delicate, even to the ungrateful. " If thou art gracious concerning a matter that has happened, and leanest to favour a man in his right, avoid the subject, and do not recall it after the first day that he hath been silent to thee about

it." The great nobles prided themselves on keeping their whole region in well-being, in bad as well as good years. "In my time there were no poor, and none were hungry in my day."

In the great sea fight of the XXth dynasty, defending Egypt from invasion, the Egyptians are represented, in the sculpture at Medinet Habu, as saving the crew of a sinking vessel of the invaders.

In the XXVth dynasty, Pankhy, the Ethiopian conqueror, was extremely indignant about the starvation of horses at Thebes. As he went down the country he pleaded with the garrison of each place to submit, "His Majesty loveth that Memphis be safe and sound, and that even the children weep not." No one was killed except in fight, and the ringleader of the insurrection came in at last, and was left in peace in his city.

Later, Diodoros says, "that the Egyptians, of all other people, are the most grateful for favours done them, judging gratitude to be the safest guard of their lives, inasmuch as it is evident that all are most ready to do good to them, with whom are laid up the treasures of a grateful mind to make a suitable return."

Genial and bright as the Egyptian was, yet the evils of decadence and bad government, and the sight of the decay of the grand cemeteries and monuments, led to a time of pessimism,

which produced some of the most touching poems. Looking at the tombs, they sang :

> " Behold the places thereof
> Their walls are dismantled
> Their places are no more,
> As if they had never been.
>
> None cometh from thence
> That he may tell how they fare ;
> That he may tell of their fortunes,
> That he may content our heart,
> Until we depart
> To the place whither they have gone "
>
> (B.D.R. 183.)

Another felt the miseries of the age, oppressed by invasions on three sides of the country, and deemed that

> " Death is before me to-day
> Like the recovery of a sick man,
> Like going forth into a garden after sickness"
>
> (B.D.R. 185) ;

and made other comparisons of death to the odour of myrrh, or to the longing to see home after years of captivity.

Even in the magnificent time of the XIIth dynasty, one could say, " Righteousness is cast out, iniquity is in the midst of the council hall. The land is in distress, mourning is in every place. . . . All men alike are under wrongs. . . . Nobody is free from evil, all men alike do it " (B.D.R. 200).

At last the sense of self-judgment dawned on the Egyptian in the New Kingdom, probably as

part of the moral changes of the ideal Aten worship. He prayed, " Chastise me not according to my many sins " ; he besought the " Lords of righteousness," who could " cut away sins," to " extinguish all sins belonging to me," that he might be fit to inhabit the blessed abode.

Lastly, we turn to the Blessings and Curses. Senusert III. said that he who maintained his frontier stone was truly his son, but he repudiated any descendant who neglected it. In the XVIIIth dynasty, if any would sprinkle water before a stele, the owner prayed Amen to favour him.

Curses are more frequent. Anta in the Vth dynasty leaves any who injure his tomb to the judgment of the great God. In the XVIIIth dynasty, a most elaborate curse seems to have no certain effect stated, beyond the damage of being no longer " in society."

The great Hittite treaty is guarded by the violator being threatened with the thousand gods of Kheta and the thousand gods of Egypt pursuing him and his, and, conversely, guarding those who keep the treaty. The favourite curse of the XXIInd dynasty was that asses might defile the man's grave.

CHAPTER IV

PRIVATE LIFE

The climate in Egypt made shelter of less importance than in any other country. Even now the people are quite satisfied with a tent open along one side or a screen of reeds to keep off the wind; the open courtyard is the natural place for daily life. Anciently in all countries man needed much less protection, both of clothing and shelter. Hence people were always accustomed to sitting on the ground, as east Europeans prefer to do now. An upright seat, with the feet below, makes too much variation of blood pressure, and the feet are naturally drawn up on the seat. The Egyptians sat for meals, often with one knee up; there is no instance of their reclining, as the later Greeks and Romans did at meals.

The various attitudes of the Egyptians doubtless date from prehistoric times. (1) The earliest that we know is with the knees together in front, seated on the ground, and the feet turned out to one side. The steatopygous figures are in this attitude, which is probably palaeolithic,

and continued for women to the XVIIIth dynasty. (2) A common attitude is seated on the ground with one knee down and the other raised, as in the early Isis and Horus. (3) Cross-legged, with feet under the knees, was usual for scribes. (4) Kneeling, with feet flat behind, was common for artisans, and also for guests. (5) Kneeling with feet upright on toes was a usual attitude in offering. (6) Squatting with knees up apparently began about the XIIth dynasty; it implies a longer thigh in proportion to the shin, and is common among modern Egyptians, but Sudanis cannot sit thus on flat ground. (7) Rarely the knees were raised, and the legs stretched forward, for some kinds of work. The attitude of submission was with the hand on the opposite shoulder. The position of prehistoric burial was contracted, with the knees more or less drawn up, the natural attitude of sleep to us. The full-length burial began about the IInd dynasty, and is still the attitude of sleep for the modern Egyptian.

At meals the men and women sat together on mats when at parties. In the houses, however, there were separate quarters for the men and women. In large houses of the XIIth dynasty a complete double passage ran in from the door through the house, one for the halls, master's rooms and kitchens, the other for the

women's quarters. In Roman times men "went to their rooms on the men's side of the house." The plans and structure of houses will be described under buildings in the last chapter. The furniture that is shown in the models of the IXth—XIth dynasties was a long couch, a chair in the top storey for coolness, a stand for water-jars and cups, a corn-grinder block on a stand beneath the stairway, and in the bedroom a forked branch projecting from the wall for an easing stool (Herod ii., 35).

In houses of the Ist dynasty fireplaces had a pottery fender round them to hold the ashes in; one, best wrought, was in the form of a serpent coiled round the fire, as the domestic snake doubtless would often lie at night. Snakes and ichneumons were encouraged, the snake being the good genius Agathodaimon, who drove away the rats which brought plague. In the XVIIIth dynasty there is a large pottery pan for the fire in the middle of the hall.

The Egyptians were a very cleanly people. The priests, in particular, only wore linen, as woollen is more liable to vermin. They had their garments constantly fresh washed with particular attention. They washed in cold water twice every day and twice every night, and shaved the whole body every third day. The modern Egyptian shaves both head and pubis.

The wearing of long hair is usually a subject of ridicule in the figures of herdsmen or foreigners; a raw countryman is shown with a fringe a few inches long sticking out around his head. In the Bucolic war the rebels wore long hair hanging down to the shoulders. The washing of clothes was a domestic duty worth figuring in full on the tomb; it is evident from the forms of state dresses that starch was constantly used for fixing folds.

In feeding, the Egyptian was ceremoniously particular. The custom stated in Genesis was that the high official, the Syrian immigrants, and the Egyptians each had separate feeding. Herodotos says that they would "not use the knife, spit, or caldron of a Greek, or eat meat cut with a Greek knife"; the impurity of iron, the "bones of Set," is involved here, as the Egyptian knives were of bronze. At feasts they sat on grass mats, as at present. Food was held in the right hand, a knife was used if wanted, but forks were unknown, as they were in England before A.D. 1300. Spoons are very rarely found before Greek times. There were small ones of ivory in the prehistoric age, perhaps used for eggs, and small spoons are found in the XIIth dynasty for unguents. A shovel-shaped bronze spoon is probably of the XIXth dynasty, but, otherwise, spoons seem always late. The simpula for

dipping liquids from a jar were introduced by the Greeks. The Egyptian sucked liquids through reeds or flexible tubes (intestines ?). The use of bronze cups for drinking, named by Herodotos, is familiar in the streets of Cairo to-day. The water-skins were of prehistoric use, the plugs of ivory or stone used to close the holes being often found. The copper knives, made for flaying off the skin entire, begin in the second prehistoric civilisation. The form of the water-skin, with a band tied to each end of it to sling it, is in the Old Kingdom hieroglyphs, and is like that borne by the water carriers to-day.

The use of beer and wine is found from the earliest records, the wine-press hieroglyph appearing in the reign of Den-Semti. Wine was in request at parties, and there is no reprehension of drunkenness till the XIXth dynasty. In the XVIIth, a servant begs the guest to " drink to drunkenness, make holiday," and a lady says, " Give me eighteen cups of wine, behold I should love drunkenness." It seems to have been no more reprehensible than going to a prize-fight now. The overthrow of national life under the Persians and the Greeks, with the influence of Greek habits, led to a decadence in luxury and drunkenness.

The security of possessions was observed by the custom of sealing, which was in use before

the Ist dynasty. The main source of information about the earliest dynasties is from the impressions of official seals on the royal jars, and such sealing continued to the XXVIth dynasty. Boxes, bags, letters, as well as large jars and doors, were all sealed by tying up and putting clay over the knot, impressed with a seal. Such seals were cylinders rolled on the clay during the Old Kingdom; but by the XIIth dynasty they were superseded by flat seals, which seem to have been introduced in the VIIIth dynasty, the earliest being of Telulu.

The lock was first used in Roman times. It was a bolt held in place by wooden tumblers, which were lifted by a key to liberate the bolt. The later Roman form had pins falling in holes in the bolt; the key lifted the pins, and then served as a handle to the bolt. Such is used generally in Egypt at present. The key turning on a peg was also Roman.

The mode of petty chastisement for men and women was making the culprit sit or kneel, while beaten over the shoulders with a short stick. Men were laid down, back up, held by the hands and feet, and thrashed.

From late sources we read of "Chariclea gently moving her finger upon her cheek under the ear," supposed to be a sign of jealousy and anger. In the same Greek tale, a man proposes to his friend

in the evening, "Let us first light a torch, and make our libations to the gods who preside over the night, so that, having performed our devotions, we may spend, without interruption, as much as we please of it in such discourses as we like."

When meeting a superior it was usual to bow forward, with the hands touching the knees, still one of the positions in the Muslim prayers. This was also the case in the time of Herodotos, who states it as the general form of greeting. Before the king, every one "smelt the earth," kneeling on the ground and bringing the forehead to the ground, another form of Muslim prostration. The higher officials did not carry this obeisance so far in the XVIIIth dynasty.

If, on visitors calling at a house, the master was out, "his daughter a marriageable maiden received them with great cheerfulness." This is still the country custom in Coptic families.

Regarding general conduct, in the XIIth dynasty Antef claims "I am one that smooths difficulties, respecting a name, divining what is in the heart." "I am one prudent in preventing and easing, greeting the mourner with pleasant speech." "I am good, not hasty of countenance, not pulling a man headlong." In the XIXth dynasty, Any says, "If thy conciliatory speech is good, they shall incline the heart to

take it." "Useful are the deeds of a friend if he purify himself from evils; then shalt thou be safe from his being lost, therefore beware of any loss of friendship." The local council of the *Saru* was a school of manners. "If thou art a successful man sitting in the council of his lord, confine thine heart to what promiseth success. That thou shouldest be silent is better than that thy speech should run wild."

Sacrifice and thanksgiving were usual before any feast, as Josephus records that at the reception of the seventy elders by Philadelphos, "he sent away the [Egyptian] sacred heralds, and those that slew the sacrifices, and the rest that used to say grace; but called . . . Eleazar who was a priest, and desired him to say grace, who then stood in the midst of them, and prayed, that all prosperity might attend the king, and those that were his subjects."

When guests came to a feast, they arrived in a chariot with servants running alongside; or, if living near, the family walked up through the garden to the house. They were met by the servants, invited to partake of fruit and drink laid out before the house, and then they entered to the feast. The grass mats were spread, the cakes lay in rows, with jars of drink. The hands were then washed, and for the royal service there were anti-splash finger-bowls of silver, turned

in so that not a drop could be spilt. When the guests were seated, damsels went round placing garlands on their necks, and pouring ointment on the conical piles of hair on the top of the head, which held it as a sponge. A lotus flower was given into the hand of each guest. Wine was then handed, and was plentifully renewed during the feast. Dancers and musicians then added gaiety to the gathering.

At the end of the feast comes the mysterious episode of a model mummy in a coffin, one or two cubits in length, being carried round to the company, " to exhort them while filled with wine to make use of things present, in that all will soon be such as it," as Plutarch explains. Yet this was part of the regular frame of mind of the Egyptian as seen in his festal songs :

> " Put song and music before thee
> Behind thee all evil things
> And remember thou only joy
> Till comes that day of mooring
> At the land that loveth silence."

Another popular mixture of regret and joy was the song of Maneros, " the only son of the first king of Egypt, and that happening to die prematurely, he was honoured by the Egyptians in this mourning dirge," the Adonis-song of the death of nature.

The guests are always represented as seated without any table, and helped by the servants

to one dish after another. Athenaeus notes that "tables are not laid at all, but dishes are brought round to the guests." This was an old Mediterranean custom, as far as Spain (Strabo III., iii., 7), and still continued till now. The Egyptian suppers were said to be much more luxurious than the Persian.

There were also in Roman times public gardens for feasting, where men and women went for revelry, at Eleusis and Canobus outside of Alexandria, where they had "a canobic life." "Day and night crowds of men and women in boats, singing and dancing, without restraint, and with the utmost licentiousness." This was the old nature festival of Egypt gone into utter decadence.

There were also funeral feasts held in the cemetery. At present, families go out to the cemetery to keep family anniversaries, living in the private enclosures of tombs; the same custom is shown by the rooms in the Hawara cemetery, with baskets, fruit stones, heaps of dates, pieces of bread, and various remains of the feasts which were held there.

There are many of the census lists of households preserved, from the XIIth dynasty. For instance, "specifications of persons of the household of the soldier Tehuti's son Hera in the second of the established trained bands, northern

uart ; his wife Sat-sepdu's daughter Shepset, his son Sneferu, his mother Harekhni, her daughters Kat-senut, Mekten, Isis, Rudt, Sneferu." In the next generation there is, " Year 3 of Sekhemka-ra, copy of the specification of the persons of the household of the soldier Hera's son Sneferu, his father having been in the second of the trained bands . . . His mother Sepdusat's daughter Shepset ; mother of his father Ha-rekhni ; sisters of his father Kat-senut, Isis, Sat-sneferu, [the last four bracketed as] orphans of the necropolis masons. There was an entry with the specification of the persons of his father's household of the year 2. This household took oath in the office of the vezier in the year 5, Tybi 8, under the seal of. . . . Made in the Office of Land of the northern *uart* in the presence of the great one of the South tens Mentu-em-hat, son of Mer-khent, by the steward of the accounts of oxen Senbni, the scribe of the council Senbef, the scribe of the army Sanehat." Here we see how a man's household was registered ; on his death, it was again registered next year as the household of his son, and after two years' delay they took the oath of allegiance in the vezier's office, before one of the Council of Thirty, with three official scribes as witnesses. This shows how closely knit the registration system was, even where no property was concerned. The regis-

tration even included every baby under a year old.

The family in Egypt was based on a matriarchal system, the office-holder or farmer who married into a family was a secondary affair; the house and property went with the woman and daughters. This was a transition state from quasi-marriage to a patriarchal system eventually, where the man dealt with the property.

There was no great break in a family by marriage, it was not generally the bringing in of entire strangers as usually in the West. There was no objection to affinity, which was rather a claim than a bar to marriage. It is still expected in Egypt that a man should marry his uncle's daughter; and Diodoros says, "It was a law in Egypt, against the custom of all other nations, that brothers and sisters might marry one with another." In the tale of Setna, it is said, "If I have no more than these two children, it is right that they should marry one another," and in Roman times they said, "You may go halfway at Athens [marriage with a half sister], the whole way at Alexandria." As regards the origin of this endogamy, we must remember that affinity was no bar in many races, from Persia to Britain. It is only recently and partially in human history that any limitations of person or time or circumstance have affected marriage;

it is one of the latest conditions of life to come under the domain of law. In Egypt, the strongly matriarchal system involved the devolution of permanent property in the female line. This was a strong inducement for the son to marry the daughter in order to inherit; sister-marriage reconciled matriarchal property with paternal inheritance. Regarding father and daughter marriage, there are no examples proved in private life, but it seems certain in the case of Sneferu and Ramessu II.

The royal succession may probably have been in the female line before the Ist dynasty. During the Ist dynasty it is expressly said to be a male succession. In the IInd dynasty there was a revulsion to the old Set party, and "it was determined that women might hold the rule," that is the kingdom went in the female line. In the IVth dynasty the kings were never sons of previous kings, and there are references to the system of an heiress being married to the most able of her equals. By the VIth dynasty the succession of sons was in force, and two queens were daughters of a vezier. The VIIth and VIIIth dynasties were Syrian. The IXth dynasty probably had male succession, by the repetition of the four Khetys. The XIth, XIIth, and XIIIth had male succession. In the XVIIIth to XXIst dynasties the male

succession was bound up with heiress-marriages, as also probably in the XXIInd—XXIIIrd dynasties. The Ethiopians of the XXVth dynasty brought in a complete system of sister-queens who were high-priestesses ; and this was continued in theory under the XXVIth, when the kings formally married the southern heiress, high priestess of Thebes, who adopted a daughter in place of actual children, while the king lived and had a family in the north. When the Persian demanded a daughter of Amasis, this was probably to get a claim of their children to the kingdom of Egypt ; he got a daughter of Apries sent to him, and the Egyptians consoled themselves for the Persian conquest by believing that Cambyses held the royal descent from Nitetis. When the Ptolemies were settled, they took up the system of sister-marriage, by Philadelphos marrying his full sister Arsinoe II., to the disgust of the Macedonians, and this continued throughout the dynasty.

In theory, then, the kingdom, like any other property, descended in the female line, and half-brothers or full brothers married the queens, in the disguise of Ra or Amen, whose embodiment on earth they were supposed to be. Tut-onkh-amen was the " living image of Amen." When the oracle of Amen said that Alexander was his son, he established the Macedonian's right to the

kingdom. All this was the purely political matter of succession, and had no reference to the harem of Egyptians whom the king might prefer, or the gathering of chiefs' and kings' daughters from abroad whom the king received in political alliance. One of these, the daughter of the Hittite king, who was given the name of "Dawn," was honoured as "Great royal wife, mistress of both lands, Maot-nefru-ra, daughter of the great chief of Kheta."

Life in the harem is figured at Amarna; the girls are dancing, playing instruments, hair-dressing, and feeding, and the rooms have musical instruments, mirrors, boxes, and chairs.

Polygamy was as usual with the kings of Egypt as with most other sovereigns. State requirements in all ages have led to the influence of a foreign princess being one of the best bonds of political alliance. The families of the Roman triumvirates were equally useful in the West.

In the high families, who have left sculptured monuments, it is not usual to find children by two or more wives. The largest series was due to the first wife being childless, and five others were taken, who all had children, five sons and seven daughters. The chief wife was probably a middle-aged woman, married for social reasons, as she was a "royal adorner"; this title is best explained by the African usage of the king's

widows, and subsequent adherents, being devoted to the service of his tomb, without any bar on their later marriage (A.E. 1921, 52). The occurrence of polygamy was no bar on the children, who were all reckoned legitimate whoever might be the mother. The priests were, however, limited to one wife; and such was the usual practice in all classes.

The personal rights of property were very carefully guarded and specified by deed. In the IVth dynasty, a son of Khofra bequeathed his two estates in the pyramid city, probably house and garden outside, to his daughter, and she having died, he left them to his wife. His country property of fourteen villages he left to his wife and children in shares.

In the XIIth dynasty, some wills are well preserved. First there is in the twenty-ninth year of Amenemhat III. a bill of purchase of two Asiatic (Amu) women and their two children, by Ahy·senb, son of Shepset, registered before the vezier Khety. Then fifteen years later, in the forty-fourth year, there is a "title to property" or will, made by Ahy.senb, named Ankhren, bequeathing all his field and town property to his brother Uah, and his "associated persons," *i.e.*, the above slaves. He seems to have died soon after, as a copy of this was deposited four months later, in the registry, apparently to get

probate of the will; for we see next, five days after, a will executed by this Uah bequeathing all things that came from his brother to his wife, Sheftu-Teta. "She shall give it to any she desires of her children that she bear to me. I am giving her the four Asiatic slaves (Amu), that my brother Ankh·ren left to me (*i.e.*, the two women and their two children named above, who must have been seventeen years old by then). She shall give them to whomsoever she will of her children." He then wishes to be buried in his tomb, with his wife and no one else. The rooms built for him by his brother are left entirely to his wife. A friend, Gebu, is appointed as guardian for his son. Then follow the names of three witnesses. A sidelight is here shed on slavery. Though these Amu women had each an infant with them when bought, yet they were left unmarried in Egypt, as fifteen years later it is the four Amu slaves which are bequeathed, and no other children are named.

The earliest marriage contract known from Egypt is of 590 B.C., and as this is identical in terms with one forty years later, it may be taken as a type, and probably of long standing. In this, after the date, A. enters the house of B. to "make his declaration of wife" for B.'s daughter C. B. gives C. a dowry of six ounces of silver and fifty measures of corn. A. takes oath that if he

leaves C., either from dislike, or preferring another ("apart from the great crime which is found in women"), he will return the dowry, and a share of all paternal and maternal property for the children which she may bear. The dowry was equal to about £20 in present values. Another dowry is equal to about £30 now. Another wife receives one qat (equal to about £1), and promises to pay half as much more if she abandons her husband. The divorce formula was "I have abandoned thee as wife, I am removed from thee, I have no claim on earth upon thee, I have said unto thee, 'Make for thyself a husband in any place to which thou shalt go.'"

In a marriage contract of Jews at Elephantine 442 B.C., Ashor marries Miphtahyah, daughter of Mahseiah. M. gives the husband five shekels ("It is accepted by thee and thy heart is content therewith"); and he gives his daughter clothing and toilet goods, and some presents to the husband, all of specified value. If A. dies without issue by M. she shall have full rights of all A.'s property, and conversely.

If the wife shall "stand up in the congregation and shall say, 'I divorce Ashor my husband,' the price of divorce shall be on her head, she shall return to the scales, and shall weigh for Ashor five shekels, and all which I have delivered into

her hand she shall give back, and she shall go away whithersoever she will," and conversely.

"If Ashor shall drive out M. from his house [without formal divorce] he shall pay her the sum of twenty kebhes [fifteen fold ?]. I shall have no power to say, I have another wife than M. and other children. If I do so I shall pay her [fifteenfold]." The signatures of four witnesses follow.

Another contract in Ptolemaic times had rather similar terms; the husband gave £5 (in present values) as bridal gift, and an allowance of 10*s.* a month for toilet money, and as much for pocket money. "Thy eldest son, my eldest son, shall be the heir of all my goods present and future. I establish thee as wife. If I neglect thee, or take any other wife than thee I shall give thee" the equivalent of £100. The deeds for half his paternal property, which his mother gave him, "and the rest of the contracts coming from her . . . shall belong to thee, as well as the ensuing rights." There is no divorce clause to this, only a fine on annulling the marriage. In a similar contract the bridal gift is £7, and the desertion fine £30, in present values.

Coming to Coptic times, there is a marriage contract of a priest's son. "Since God willeth that we should unite one with the other in righteous wedlock, after the manner of every free

man and every wise woman; therefore I have given thee 16*s.* in gold as a bridal gift, that thou mayest come and enter my house as a free woman. And for my part I will not neglect thee more than as it were my own body. Neither shall I be able to put thee forth without a cause having legal ground. But should I wish to put thee forth, I will pay 70*s.* for the matter," and conversely. This in modern values would be about £8 bridal gift, and £30 fine for divorce. The prelude seems distinctly aimed against monasticism.

In mediaeval times, a contract of the XIIth century has a dowry of 100 solidi (about £500 value); a fifth paid down, and the rest to be paid within five years. A contract of A.D. 1208 has similar terms.

We see, then, that in Egyptian view, and continued in Christian times, there was only a business contract of marriage, and, as in any other business, there might be a heavy fine for the inconvenience of breaking the contract. Sometimes there is only a plain return of values given, down to the fourth century B.C. Later there is the fine of larger amount. By the change occurring then, it looks as if this were due to Greek influence. There is no trace of marriage being insoluble, even in the Christian contract; and no trace of any religious ceremony or sanctity attached to it. This may have existed, but

there is no historic trace of it in the Egyptian royal history, nor in the detailed account of the festivities of the Ptolemies. Diodoros states that "in contracts of marriage, authority is given to the wife over her husband, at which time the husbands promise to be obedient to their wives in all things." There is no trace of this in the contracts we know, and it seems likely that it is an exaggeration of the claim of an heiress to manage her property without interference. On the monuments the wife is always represented on an equality with the husband, and a wife was considered essential for the future life. If no sculpture or painting was used, then a pottery model of a couch with a woman's figure on it, and sometimes a child, was provided very usually, from the XVIIth dynasty to late times.

The business position of women was secured by law if they could write and had three children. So Aurelia Thaisous called Lollianē, daughter of a retired clerk of the market, claimed that as she was "able to write with the greatest ease," she should act for herself. Four years later, A.D. 267, she bought two houses and some land.

As the husband was responsible for his wife's debts, the way to clear up a bankruptcy was to divorce the wife with her dowry, let her go bankrupt on her own estate, and then re-marry

her, with a pre-nuptial lien on her property, so that, in case of a serious divorce later, he should not lose his claim to repayment. The legal rights of their son were duly guarded in the changes.

In questions of descent the female line was principally regarded. The mother's name is always given, the father's may be omitted; the ancestors are always traced farther back in the female than in the male line. The father was only a holder of office, the mother was the family link. Hereditary offices are sometimes traced through a succession of men, but we never meet with a line of solely male descent otherwise. The same in respect of property; that goes through the *nebt per*, the mistress of the house; we never find a *neb per*, or master of the house. The maternal uncle is often named as important. The father of the mother was more important than a man's own father. As we have noted in the first chapter, the descent of trades and professions was not strictly by caste; but the prohibition to change occupation would prevent any youth from stepping outside of the occupation of his father with which he was familiar. The anxiety of sons to succeed to the office of their fathers shows how strong was the feeling on succession.

In the priesthood the succession was still more fixed, and, in general, became strictly

hereditary by the original training needful for the rites, from the habit of respect, and the riches of the endowments. The main exceptions were when the king put one of his sons into the great offices of high-priest of Memphis or Heliopolis. Yet, as these were originally royal functions, the succession was in the family, though not necessarily from father to son in one line. In the XIXth dynasty a high priest says "The king has granted that my children being assembled in a tribe of my blood, he would establish them among the prophets who are under his direction. I am first prophet of Amen, and my son is established by my side as second prophet, and sub-director of the royal palace on the west of Thebes; the son of my son will receive the titles of fourth prophet of Amen, divine father, officiant, and priest." At Memphis, Herodotos was shown a series of wooden statues, 345 in all, which were asserted to be those of the high-priests of Ptah, in continuous order, father and son. In Roman times, the high-priesthood of Ptah was regarded as the right of the eldest son, and a younger brother was "against all law" in getting hold of it.

As fixed property descended in the female line, it was natural that the duty of supporting parents devolved on the daughters, and not on the sons, and this surprised the Greeks.

The inheritance of property we have noticed in the case of Khofra's son. Rather later there is Nek-onkh, who having the right to bequeath two land endowments, recites the origin of them under Menkau-ra, and his appointment by Userkaf, and then leaves them to his children jointly, acting corporately in both offices. Each child is to serve one month in the year as priest of Hathor, and another month as priest of endowments of Khenuka. The endowment was equally divided. Besides this there is the disposal of his private property.

In the XIIth dynasty there is the distinction between the paternal estate of a noble, which he could bequeath, and the official estate, which was only for his life; the endowments from the latter depended on the goodwill of his successors.

The paternal estate was tied up sometimes like an entail, with a clause prohibiting subdivision, "property of one alone, transmissible to one alone"; sometimes to the son of the son, in other cases to the daughter of the daughter.

The chief filial duty was making the ancestral offerings, as in India and China. The eldest son was termed the "support of his mother" *onmut·ef* (or "of thy mother," *on·mut·ek*), and, dressed in the panther's skin, he makes the funeral offering for his father. In the reign of Pepy II. the prince Zau II. says, "I buried my

father the prince Zau splendidly, more gloriously than any equal of his who was in the south country. I prayed as a beggar from the majesty of my Lord the king of Upper and Lower Egypt Nefer-ka-ra, to draw (from the Treasury) a coffin, cloth, festal perfumes, for this Zau. Moreover I caused myself to be buried in one tomb with this Zau, in the desire that I might be with him in one place. Not at all through lack of means for making two tombs, for I did this in the desire that I might see this Zau daily." These royal gifts were more readily obtained as Zau was the brother of the two queens of Pepy.

The pulling down and slaughter of the ox at the funeral was the duty of the sons, who are figured with their names in the scene of sacrifice. They also netted the birds for the sacrifices, as Ramessu does for his father Sety I. at Abydos.

The education was looked on as a special duty of affection. In the Vth dynasty, it is said, " If thou art a successful man, and thou makest a son by God's grace, if he is accurate, goeth again in thy way, and attendeth to thy business on the proper occasion, do unto him every good thing, for he is thy own son, to whom it belongeth that thy *ka* (ancestral family spirit) begat; estrange not thy heart from him."

During infancy the children were carried by slinging in a shawl wrapped round the mother or

elder sister, sometimes in front and sometimes behind. One of the favourite amusements, as they developed, was the modelling of clay toys on the canal banks, like modern African children. The best of these were brought home to play with, and are found in the houses,—crocodiles, pigs, sheep, men, boats, and even a sarcophagus and mummy. Modelling has not been quite suppressed by Islam, and I have seen a boy drag ging along a lump of mud with four sticks set up in it, and a bit of rag on the top of them; he explained this to his sister, saying, "This is the bride." Beside the children's own toys, there were others made for them of wood, sometimes working figures; but these are of less interest than what children make for themselves. Wooden tops and tip-cats were in constant use as well as balls of leather stuffed, of wood, or tied-up rags, which are now the commonest.

School life began early, as it now does in Egypt; it cannot have been very effective, as it did not lead to any complex subjects. It was probably, as now, a routine of memory, without trying to realise the meaning. There were schools attached to the various offices, to prepare for the official work. The priests were mainly the teachers for the higher subjects of hieroglyphic writing, geometry, arithmetic, and ethics. The oldest text-book that we have is the repudiation

of sins in the Book of the Dead; that is in seven categories, each of five statements, a system adapted for remembering by finger counting. From the absence of any family duties in it, it seems to belong to far back in the prehistoric time. Potsherds were used for the beginning of writing, and later a board covered with fine stucco, which did not let the ink sink in, so that it could be washed clean. Literary works were the higher copies set, and these school copies form a large part of what has been preserved to us.

In a tale of the Vth dynasty, a woman of high rank is supposed to be able to read the hieratic of the time, but writing needed the skill of "a good writer, and a very learned one." The scribe's training was essential for the full ability of accurate use of all the hundreds of signs and details of customary expression. Yet we find in all ages awkward and blundering writing, evidently from unprofessional persons. A common tallyman could put down the names of the boats and their cargoes of stones. In the Roman times blundering letters of farmers are often found, and writing of various unofficial qualities from higher people. The daughter of a market clerk states that she "can write with the greatest ease." Even the professional scribe was by no means faultless in his reckoning, and mistakes of adding are common.

For the highest classes, the training was in the nursery of the palace, where they mixed with all the children of the harem and hostages from the Syrian princes. A large staff of nurses and attendants managed them; and the elder ones had tutors (called father-nurses) who educated them, and who are figured in their tombs with a prince on their knee. These tutors were men of great ability, though not always of high family. Senmut, whose "ancestors were not found in writing," was of great importance officially, and was the tutor of the heiress Nefru-ra. This court training was always remembered, and in biographies the nobles would say that they had been a "child of the king of his bringing up." Of the XIXth dynasty there was a tradition that all the children born on the same day as the heir were to be brought up with him. This was perhaps connected with their having the same horoscope, and therefore coalescent in their fortunes. The number is stated to have been 1700, which seems an exact record. With a birth-rate of sixty (as now), and one quarter dying before school life, it implies a population of fourteen millions, which is about the present amount. This confirms the accuracy of the sources of Diodoros.

The course of an official life is best given by Bekenkhonsu. He was born before 1320 B.C.

After 4 years of infancy, and 4 to 16 years of youth, from 16 to 20 he was priest of Amen, 20 to 32 divine father of Amen, 32 to 47 third prophet, 47 to 59 second prophet, 59 to 86 first prophet, within the reign of Ramessu II., who died 1234 B.C. He continued to live as first prophet, high priest of Amen, till Ramessu III., 1202–1170 B.C. Hence he lived at the least 1320–1202, or 118 years, and probably some years before and after those shortest limits.

Under the Persians, education did not suffer. Darius ordered all necessaries and instruments to be supplied for medical training. The system of Greek education by visiting celebrated teachers at various cities was broken up by the incessant commotions of the Kingdoms, after Alexander. Alexandria also suffered by the murders and banishments under Ptolemy Physcon, about 140 B.C. Thus the great school of learning in the Museum was broken up, and the teachers fled to the islands and Greek cities, and so started a new activity of knowledge and business in regions which were by that time fairly tranquillised under Roman direction.

Clothing begins entirely for utility. Throughout the Mediterranean it was scarcely known in the prehistoric ages, and was not fully used till late in classical times. After the goat-skin on the shoulders of the earliest Egyptians,

men wore a belt, and the earliest woman's dress was the fringe now worn in Nubia. Linen then began to be woven; and in the later prehistoric age women wore a tight skirt of white linen to the knee, but not constantly.

In the Ist dynasty cloaks were worn as a protection from cold, sometimes padded. The king and nobles usually wore a short waistcloth, and, for more protection, a vest. Workmen had merely a cloth round the hips, sufficient to sit on, with the ends tied over the stomach. This continued for field workers till the XVIIIth dynasty. In upper-class dresses, gauffering was used on waistcloths, to allow of free motion, as early as the IVth dynasty.

The waistcloth was next held up by a shoulder-strap, or extended up the back, and then held up to the breast by two shoulder-straps, down to the XIXth dynasty. Crossed braces were used in the XIIth dynasty and onward. The representations of dress lagged behind the actual development, and by the Vth dynasty women really had tight-fitting dresses to the ankles, with tight sleeves; a slit back and front at the neck enabled it to be put on, and it was drawn together by a cord.

For trades where there was chill in water, a body-clothing to keep in the warmth was early developed; but this scarcely reached the hips,

and was solely for health and not for concealment. In later times, great complications of dress were made for display. The official dress was always fuller than the private dress; the veziers wore a long thick wrap from just below the breast down to the ankles, held up by a cord passing behind the neck.

From prehistoric times the head was shaven, and a wig worn when out in the sun. However this custom arose, it was certainly kept up for the sake of cleanliness. Women wore short hair beneath the wig. In the XIIth and XVIIIth dynasties, girls and women wore their own hair plaited, and in three masses, two in front and one behind. Rarely, the front hair was shaven in a peak for servant girls.

CHAPTER V

SUPPLIES AND COMMERCE

HERE we shall consider the physical supplies of food, the production of goods, and the means of distribution.

Everything in Egypt is regulated by the seasons, not only the agriculture, but all the employments of man, owing to the alternations of dry sterility and overwhelming water with intense fertility. The traditional dates taught by long experience were that the Nile was lowest early in June, it began to rise early in July, rose freely during July, and the High Nile festival, on opening all the canals, was August 23rd; the highest was at two maxima, September 26th and October 15th, after which it rapidly subsided, and sowing came early in November.

After the inundation, the expanse of miles of mud flats stretches north and south to the horizon; as soon as that will bear a man's weight the peasant tracks over it in trails about four yards apart, sowing broadcast as he goes; the mud is raked over the seed, or branches are dragged so as to cover it. In a week or two the

green haze of shoots appears and quickly hides the mud flat, and the first of the three seasons has begun, the *growing* season. The people come out and live in reed huts in the middle of their clover, with the cattle tethered on the pastures around them ; and in the Ist dynasty the great men had their wooden houses moved down and re-erected in the plain. Then, as now, by early April, all these crops were ripe and harvested, and the land was a bare expanse of black hard mud-soil, cracked in all directions, 10 or 15 feet down, by drying, with traps enough to hold a man's leg ; a grey waste in the shimmering heat without a trace of vegetation. Next came the *house* season, when nothing could be done in the open by reason of hard-baked heat. Close to the canals a little could be raised by watering, just for cattle crops. At the hottest time, when the Nile has almost dried to a mere ditch of reddish, slimy water, there begins the promise of new life ; the rise is rapidly absorbed by the deeply cracked soil, and the *inundation* season has begun. As the water creeps up and covers the land, the rats all assemble on the dykes that divide the country and swarm about, while far out at sea, as it looks, the shoulders of a man and the head of a buffalo may be seen, half walking, half swimming, from one village to another. As Herodotos says, the villages look like islands in

the Aegean. Nothing can be done; and the wise kings of Egypt levied the people for practical instruction in combined labour on those great works which are the imperishable glory of that land.

The course of work is best recorded by the papyri of Roman age. There we see that, in September, the work was guarding the dykes to save them from being lapped away by the ripples of the flood, also the raising of water for any lands which remained above the inundation. In October this irrigation went on, and the land that might be emerging was being broken up. Then came the great sowing in November. While the crops grew, the trimming of palm trees and vines could be managed. In April and May all were busy harvesting and on the threshing floor. During the inundation, August to October, there was not only the guarding of dykes but the shifting of fodder, feeding of cattle, and making the farming implements ready for next season.

The amount of the inundation varied in different parts of the valley, according to the breadth which it covered. As Plutarch says, at the narrows of Elephantine it rose 28 cubits (48 feet), at the end of the valley, at Memphis, 14 cubits (24 feet), and down in the Delta, near the sea, only 6 cubits (10 feet). Pliny describes the varieties of amount at Memphis as 12 cubits,

causing horrible famine; 13 cubits, security; 14 cubits, a fair season; 15 cubits satisfies all; and 16 cubits "produces unbounded transports of joy." The greatest known was 18 cubits, under Claudius, the least only 5 cubits, in 48 B.C.; and Strabo names a very low Nile in 40 B.C.

For the measurement of the Nile there were Nilometers at several places; Elephantine, Thebes and Memphis are the best known, and such gauges were certainly set up by the beginning of the Ist dynasty, as the records of heights in the Annals prove. These are stated exact to a sixteenth of an inch, and must have been observed in a still chamber. The Nile seems to have been rather more equable in those times, as in forty-nine years' record the extremes are 7 cubits apart, whereas the Roman extremes were 13 cubits apart; the average variation from the mean, including a chronic change of rise of level, was only 1 cubit 1 palm, or a couple of feet. The probability that the Nile drained a larger extent of equatorial lakes then would account for there being less variation.

The modes of artificial irrigation are simple. The plainest of all is for two men to sit one each side of a channel, and swing between them a flat basket by ropes; they catch this in the water and swing it up about 3 feet to a higher channel, where it tips up. The motion

is rhythmical, there is little friction, and not much waste. The *shaduf* is certainly as old as the XVIIIth dynasty. A couple of posts about 6 feet high support a long swinging pole; one end of the pole carries about a hundredweight counterpoise; from the other end hangs a long rod with a bucket at the bottom. The worker drags down the rod (so lifting the weight on the other end) until the bucket is immersed; then, with a little lifting of the rod, the bucket rises mainly by the counterpoise; it is grasped and tilted over into the high level channel; then the movement is repeated.

The Archimedean screw seems to have been the next method, as it is named by Strabo; it is a watertight screw channel round a cylinder. The cylinder is set at such an angle that the screw cannot let the water run back past the rising turns. By steadily rotating it, the water rises and pours out of the top. The water-wheel, with a chain of buckets—the *saqieh*—did not come in till late Roman times, as the peculiar pot for this is not found till then. A horizontal treadmill was worked by men for raising water, apparently a mere reversal of a water-wheel.

Corn.—The sowing was broadcast, as it is to this day; and the grain was covered over on the mud by dragging a branch, or raking if still wet, by trampling in with pigs or sheep, or if

drier, then by a light surface ploughing. Serious ploughing is only done in case of a later sowing, when the land is fairly firm. The early plough was a hoe, with the long handle attached to the cattle to drag it. Handles were then added to guide it. These became longer and curved, so that the ploughman did not need to stoop. By the XVIIIth dynasty the handles were tall and upright, joined by cross-bars, and with loop holders on the top. This form continued till late Roman time. If the ground were dry when ploughed, the large clods were broken up with mallets or hoes.

Reaping was done with a jaw-shaped wooden sickle set with serrated flint flakes. The ears were cut off close and put into a linen bag, on the hip, or held by a band across the forehead. The straw was then rooted up and broken small for fodder. Otherwise about half the straw was left with the ear if it was to be bundled for the granary. The threshing floor was trampled by oxen or by asses ; there is no trace of a *tribulum*. The winnowing with wooden scrapers, or a wide sieve, was usually done by women.

Granaries were either conical brick enclosures or else a row of chambers with barrel roofs. The floor was laid with a thick layer of limestone chips, to keep back the rats. The conical enclosures were rather for the ears of corn, and the

vaulted chambers for the grain. The principal grains sown were wheat, barley, and maize or durra. In the early dynasties, wheat was parched in large deep pans, sunk in pits, and propped with bars of pottery, round which a smothered fire was lighted. The use of this was to dry the corn so that weevils would not attack it, and to give a toasted flavour. At present, cobs of American corn are commonly roasted and eaten.

Vines.—Though the vine is not common in Egypt at present, owing to the prohibition of wine by Islam, it was generally cultivated anciently. The wine-press hieroglyph appears in the middle of the Ist dynasty, and the Egyptian tradition that Osiris first knew the vine, and made wine, points to its belonging to the first prehistoric civilisation. In the Old Kingdom the vine was trained on trellises, sometimes from the ground upward, sometimes altogether overhead. In the New Kingdom, a large square court occupied the middle of the garden of a mansion, entirely covered with vine trellis, to form an open-air residence for the summer. This served as an architectural device, being imitated in the great hall of pillars at Amarna, which was roofed with plaster on which a vine was painted (P.T.A., xxxvi.).

The grapes were gathered in baskets and

carried to the wine-press, a large trough in which they were trodden out by men; ropes, or a horizontal pole overhead, supported on uprights, served for them to hold on by, so as not to slip. The first flow ran off at the end of the trough into jars. After that the skins were put in a cloth, which was tightly twisted to squeeze out the remaining juice. In common usage, poles were put through turns of the cloth at each end and twisted by men, while another man stretched himself full length between the poles to keep them from drawing together. But as early as the Ist dynasty there was also an upright frame in which the cloth was twisted. Strangely, there is never a trace of binding the mass with rope, which would have helped the pressure. There were several kinds of wine named in the early offering lists. Wine of Buto and of Esneh, thin wine, white wine, and others. In Greek times, the Delta wines were celebrated, the Mareotic in particular. The vine was greatly cultivated round the Fayum, and in the Oases.

Vegetables were largely cultivated, though now restricted to but few kinds. Peas, beans, and lentils were important crops, and as the Nile receded, the banks were the favourite place for onions, leeks, and garlic, as well as cucumbers and melons of various kinds. The colocasia was grown in the marshes, but it is not much seen

now; the root needs to be sliced and soaked before it is cooked, apparently to remove some deleterious matter. There was a great variety of plants grown for oil, radishes especially, safflower, sesame, lettuce, coleseed, linseed, as well as the familiar castor-berry and olive. The latter could not be grown with the inundation, and so was restricted to the Fayum and Alexandria, and by a spring at Thebes.

Flax was an important crop, as providing nearly all the clothing of the country, besides the linseed oil. In Roman times, four kinds were distinguished, from Tanis, Pelusium, Buto, and Tentyra. Cotton was known on the eastern side of the country, but was still scarce in Roman times, and only came into frequent use under the Arabs.

Of fruit trees, the dūm-palm, sycomore fig, and the kharub are probably the aboriginal trees; the date palm came from Mesopotamia and does not seem to be prominent in early times, any more than the pomegranate. The fig is at present mainly grown at Alexandria, and does not seem to have been common, as the inundation would not suit it. The nebbek is an early tree, but the fruit is very poor. Of timber trees, beside the sycomore fig and palm, the principal were the tamarisk, which grows abundantly on saltish sandy land, the persea, and the acacia or *sont*,

which gives a hard, knotty wood. Foreign trees were mainly used for furniture—pine and cedar from Syria, ebony from Nubia, and the plane perhaps from Syria. Trees were largely planted around temples, as at Deir el Bahri and the pyramid of Lahun.

The oxen of Egypt were of two kinds, the zebu of Africa, with wide-spread horns, and the short-horned ox, with upright horns drawing together at the points. The long-horned zebu was not so robust, and suffered frequent murrains until it was swept away in 1863. There is a similar difference in the sheep; one breed had long horizontal horns, twisted, commonest in the Middle Kingdom but now extinct; the other had the curved horns, like Jupiter Ammon, of which there are now some magnificent animals. The goat was common in all ages, and now seems to live on impossible scraps of vegetation. The pig seems to have been entirely apart, tended by an outcast tribe, and only rarely coming into Egyptian life, mostly as an animal devoted to Set, and sacrificed as an enemy to Osiris. The ass was also under a cloud, as belonging to the god Set, but was too essential as a beast of burden to be neglected. There were asses in Libya before the Ist dynasty, and they abounded in Egypt during the Old Kingdom. They were indispensable for transport of food and water

in the great quarrying expeditions and in warfare. The camel seems to have been always on the borders of Egypt, appearing in the Ist, the XIXth and XXVth dynasties, and fairly often in the Roman period as a carrier of large water-jars. When it came in as the main vehicle for heavy burdens, at the Arab invasion, it greatly altered the country by destroying the desert trees and vegetation. The horse does not appear before the XVIIIth dynasty, and then solely for chariots. It seems to have been too small for riding, and it was only after being bred larger in the rich pastures of Egypt and Libya that the great horse was produced. It was apparently brought from Central Asia by the racial migration of the Aryans, who swamped India and came as Kassites into Babylonia, probably pushing the Hyksos before them down into Egypt. The horse never seems to have been used for the plough; oxen were anciently so employed, and now buffaloes, with rarely the camel or ass.

Of dogs there was a great variety of breeds, showing that they had been collected from very different modes of life and surroundings, probably from different countries. The larger varieties were hunting animals, and the smaller ones scavengers, like the jackal. The lesser dogs were usual as pet animals.

The cats do not appear before the XIIth

dynasty, when a thin, long-necked cat is figured, which may be wild or domestic. The cat was associated with Hathor in Sinai during the XVIIIth dynasty. The many figures found are nearly all servals, and once a cheetah; others are unassignable (P. Sin, 148).

The rearing and artificial feeding of animals were carefully carried on. The long period of the inundation necessarily made cattle dependent on man for stored food, and this doubtless led to the regulation of the method of feeding. Cattle, as well as cranes, geese and other birds, were fed by hand with balls of paste. Even crocodiles, as sacred animals, were fed by hand. Regular stables and pens were provided. The artificial hatching of eggs is part of the same system, which has never been equalled in other lands. For the young birds there were pottery coops, with sliding doors to protect them from cold and from jackals at night.

Fish formed a large part of the food, especially of poorer classes, for whom they were split and dried. In the earliest scene, at the end of the IIIrd dynasty, the heads and tails were left on, and the body was split at the back and thrown off open across the front (P.M., xii.). In the great festivals of the XXth dynasty there were 6,000 fish on the great day of the feast, when probably 10,000 people were present, and

1,000 daily during the rest of the feast. The provision of such large numbers for a given day shows that they must have been kept in fish-ponds, stored from previous catches. There was as much weight of fish consumed as of meat and birds in the feast. The use of fish was forbidden to priests; and this idea of impurity of fish was strongly held by the Ethiopians, so that the kings and chiefs of the Delta were not allowed to enter the palace for audience of Pankhy, because they were fish-eaters; one prince, however, was admitted because he ate no fish.

Of *artificial productions*, one of the earliest must have been leather-work. The oldest class of burials have only a goat-skin thrown over the body, and such was the custom of the Palestine Bedawy down to the XIIth dynasty, as one of the inducements to Sanehat to return to Egypt was that he should not be laid in a sheep-skin when he was buried. The salving of skins whole, for use as water-skins and bags, was an important art; the sign of the rolled-up skin came to mean that which was "saved" and put by. A special form of copper knife, very wide, short, and dished, was made from prehistoric times onward, for flaying, in order to avoid cutting through the skin. The whole water-skin, with a strap tied to each end of it, is a hieroglyph in the Vth dynasty, exactly like the water-skins used now.

Leather was employed for sandals, covering of seats, chariot work, shields, and many other purposes. For ropes, it was cut as a spiral from a skin, in a very thin strip, and these strips were then twisted to form a leather rope, and so obtain more pliancy than a single strip. The greatest art was that of cutting network in leather. Rows of slits, breaking joint, enabled the leather to be stretched out like the present slit-metal lattice. The lines of leather between the slits were incredibly thin, yet appearing perfectly even. Such networks were used to cover and retain linen dress, and for the working men they were stouter, and had a portion of solid leather left in the middle of the network to take the wear.

Basketry preceded the earliest pottery, as the decoration of the white-lined prehistoric ware is always an imitation of basket pattern. This points to the pottery starting from a clay coating of a basket to make it waterproof and fireproof. The early baskets, from the middle of the first prehistoric age, are all made by coiled work, overcast by split fibre. Such coiled baskets were made with conical lids, and a seat for the lid; in the later prehistoric time they were imitated in pottery. The same form is found used in the XVIIIth dynasty, and is still made in Nubia. Large elastic baskets were in use in

the Ist dynasty. Stiff baskets were greatly used for farm produce in the Old Kingdom. Flat, square bag-baskets were used for carrying seed or food. In Roman times a great variety of stiff open-work baskets were made for fruit, etc.; also plaited palm-leaf baskets, not unlike those of the present day. Flat papyrus slices of the outer brown skin were greatly used for making boxes for food, framed on lengths of reed lashed together. Seats, also, of the same materials have a remarkable mass of diagonal struts to render them firm.

Matting was very much used from the first prehistoric age onward. The patterned mats were laid on bed frames in the Ist dynasty, and used for hangings in the Old Kingdom. The common mats were made precisely as at present. Mats of very thin grass stems, laid parallel, were made in the Hyksos time.

Brushes were common; those for sweeping the floor (P.T.A., v.) were fans of split reed; and much the same form was used for fanning the charcoal fire in cooking (VIth dynasty). Similar brushes, rather thicker and clumsier, are still usual. Round brushes of fibre, without a separate handle, were used for paint.

Papyrus was largely used for the light cabins on boats, as the *khaker* ornament on the top is derived from the papyrus head. It was also,

apparently, the framework for matting sides to rooms, judging by the *khaker* along the top of the walls in tomb chambers. The writing papyrus was made by splitting apart the thin layers of the stem concentrically, those nearer the centre being the thinner. This was done by a very long and narrow knife slid in between them. Two such layers were then laid at right angles and moistened with mucilaginous water, pressed and dried. Eight grades of thickness were known in Roman commerce.

The earliest form of carpentry is the solid block dug out, hollowed by fire or axes. Such dug-out blocks for coffins are found in the Vth and XVIIth dynasties, and continued for boats till Roman times. The working of wood was at first by small adzes half an inch wide, or tiny bar chisels, sharp at each end and held between the fingers. As copper became commoner, large tools came into use, about the beginning of the Ist dynasty. The sawing of boards gradually began, with large wide knives notched on the edge; these led to the use of saws with regular teeth by the IVth dynasty.

Wood was carefully trained for ten or twenty years of growth to form the right-angle pieces needed for joints. Even a three-legged stool, all in one piece, was made by training three branches in the right directions, and then cutting

the seat out of the trunk. The bed frames were formed of massive poles tapering to the ends, with slits cut from the inner side turning out below so that the webbing should not cover the pole. Others had cord matting worked over the poles. The mitre-jointing was very varied, six different forms being developed from the plain square-end joint.

The greatest wood construction was for the Royal Tomb chambers, with beams 10 inches square and 18 or 20 feet long. This was the perpetuation of the home of the living king, as we find that there were immense wooden houses, formed of planks set upright, overlapping at the edges, and bound together through slots. This system prevented contraction of the wood causing any gaps, and neither dews of night nor sun by day made any perceptible difference. Such timber houses were imitated by the system of recesses with stepped sides, which formed the pattern of the brick mastabas, and hence of stone building.

The design of Egyptian furniture is always excellent, mechanically. The joints have angle pieces of naturally bent grain. The chair backs are well supported with diagonal stays behind, like old Windsor chairs. The tall thin legs of tables are held in by a crossbar and diagonal struts. The lines of couches and chairs are

flowing and harmonious, the proportions look safe and true, without being clumsy. A most ingenious form of spring served for suspending the portable shrines; straight at one end and steeply curved at the other, the weight, which was hung near each end, contracted the straight length and expanded the curve, so that the total length, framed in, remained equal.

There was, however, the sham of cheap imitations. Where a tenon of a crossbar was supposed to go through a chair leg it was only short, and a piece of inlay was let in where it should come through. Veneers of ebony and other foreign woods were glued on. Patterns were done in white paint instead of inlaid with ivory. Paint grained to imitate valuable woods was as common as in Victorian houses; painted wood even did duty for valuable stone vases; grained wood patterning, showing all the knots and waviness, was excellently painted as early as the IIIrd and IVth dynasties (Q.T.H. viii.–xiv.; L.D., ii., 21; also granite imitation, 19). At Amarna, limestone columns were painted to imitate glazed tile lotus plants, bound in with gold bands (P.T.A., 9); the inlaid jewellery was imitated by capitals inlaid with coloured glazes, with gilt stone between, and that, in turn, was imitated by mere paint on limestone.

The wooden head-rest was the most personal

possession, made with a curve to fit the head close above the ear. It is comfortable to sleep on, especially in hot weather, as the shoulders and head can be left clear to cool, while the wide surface of the wooden support spreads the pressure as easily as a cushion.

Ivory was largely used, as the elephant was still within reach. Even as late as the third century B.C. the Carthaginians could obtain large numbers in North Africa. Figures of men and women carved in ivory and in hippopotamus tusk were frequent in the first prehistoric age. Small spoons were also usual, perhaps for eating eggs. The ivory figures of the old king of the Ist dynasty and of Khufu are two of the most lifelike pieces of Egyptian art. The dancers' wands were of ivory, either elephant or hippopotamus. The largest pieces are the veneers of the game board from Thebes (C.C.F.Y., pl. l.) of the Middle Kingdom; and such veneers continued to be used till late Roman times.

The history of Egyptian pottery and its varieties would occupy many volumes. The prehistoric pottery belongs to the earliest civilisation, and was probably brought in from the west by the immigrants. It was entirely made by hand, pressed into form, and not coiled as in some countries. The next stage was wiping the

top round. By the Ist dynasty, the grand jars then made were wheel-turned; yet hand-work and wiped necks continued for centuries later. In the IIIrd dynasty, rough pots were made by turning in a hole in the ground, while the hand wiped them. In the XIIth dynasty, the potter turned a table with the left hand while he modelled with the right, finally cutting the vase off a block and scraping the base. Large jars were made in two halves and joined in the middle. In the XVIIIth, large jars were made, mouth down, on the wheel, closed in till the hand could just be withdrawn, and then the base closed with a lump of clay, smoothed on the outside but left rough inside.

Glazed pottery was introduced at the beginning of the first civilisation, probably from another country. The blue or green colouring of the glaze needs skilful heating at an exact red heat for many hours, and could not be made without long experience. The finest lazuli-blue glass was introduced early in the second civilisation, and glass appears very rarely at other periods, evidently an imported luxury. Only after a host of Syrian craftsmen were introduced, in the XVIIIth dynasty, was glass abundantly made in Egypt. Elaborate mosaic work in glass is known by one example in the XIIth dynasty, and then never again till Ptolemaic times; it was

evidently brought in the first instance from some foreign source. In Greek and Roman times most delicate mosaic designs were formed in rods, and drawn out to a microscopic minuteness, some lines being only a thousandth of an inch wide. Alexandria was famous for this work.

There were ten metals and about eighty different minerals and rocks known to the Egyptians ; of these, all but nine are known to have been used. Gold was used in prehistoric times, but in the earlier dynasties it was always alloyed with silver, which suggests that it came from Asia Minor. Silver was also prehistoric, but down to the XVIIIth dynasty it was almost as rare as gold, and only less valuable by its colour and ease of tarnishing. After the Hittites were in full contact with Egypt, silver became less valuable. Gold and silver were not only used for jewellery, but also to ornament stone vases with gold brims, handles, and bases, and with silver lids. Gold tips to bows, gold knife handles and gold sheet were made, beads were skilfully burnished over a core of limestone ; all these are prehistoric. In the Ist dynasty, the soldering of gold was perfectly executed with the utmost minuteness. Copper was known in very small amounts from the beginning of the prehistoric civilisation ; but it did not become common for tools till the beginning of the dynasties. Various

small amounts of alloys were used to harden it, probably by mixing ores for reduction ; bismuth, manganese, arsenic, and tin are thus found used. Platinum was used for inlaying in the XXVth dynasty. Lead was used in prehistoric times, but was not common till the XVIIIth dynasty, when fishing nets were weighted with it. Tin was obtained pure in the XVIIIth dynasty, and antimony in the XXIInd. Iron was made into beads in the second prehistoric age, and ranked with gold. Sporadic examples of iron work are known of the IVth, VIth, XIIth and later times, but so seldom that it was probably native or meteoric, and not reduced from ore. It was well known by the XIXth dynasty, but the association with Set hindered its use till Ptolemaic times. Mercury was not known till introduced by the Romans. Beautiful stones and rocks were eagerly sought in the eastern deserts, and selected for carving and engraving. Some were so rare as to be seldom known. The red porphyry appears a little at the beginning of the Ist dynasty, and then not again till Roman work. The amethyst, of which only one vein is known, was worked in the XIIth dynasty, and then not again till the late Roman age. Amazonite was used in the VIth to XVIIIth dynasties, but the source is yet unknown to us.

Casting of metal was usually in open

moulds, or else by *cire perdue ;* the latter was of extraordinary delicacy, the metal being often only $\frac{1}{50}$th of an inch thick. Closed moulds, with relief casting, were usual in Syria and the east. Thin copper vessels were hammered out and hammered sheets were built up into statues on a wooden core, secured by lines of nails at the junctions. Wire and chain of copper were well known. Autogenous soldering, with the same metal, was used for jewellery in the Ist dynasty and for copper in the XIXth dynasty. Soldering with lead and tin alloy is Greek and Roman.

Brick-making began in the late prehistoric age, and prevailed all through the history. A mud-brick fort of the IInd dynasty is still standing 35 feet high and very little weathered, at Abydos. The enclosure walls of temples are of amazing thickness, as much as 80 feet at Tanis, of the XXIst dynasty. At Amarna the palace walls are double, with a passage between for the patrol of a guard.

Spinning and weaving were already in use in the first prehistoric age. By the Ist dynasty, the fine linen was equal to the best cambric handkerchief for evenness and closeness of the threads. The finest ancient linen is twice as fine as this in the warp. The spinning was, of course, entirely done by hand, and the type of spindle varies from age to age. Pattern weaving in

colours is known of elaborate design, with hieroglyphs, in the XVIIIth dynasty; but it is so exceptional that one may suspect it to be due to Syrian or Babylonian work. Dyeing was familiar from the XIIth dynasty or earlier. A complete dyer's workshop of Roman age, with the vats containing colour, was found at Athribis, near Sohag. Mordants were then used, as Pliny described; and the first soaking of parts in alum fixed the colour in the patterns.

The colours that were used in painting were *red*, haematite and burnt yellow ochre; *yellow*, various ochres, and, in fine work, orpiment; *green*, malachite till the VIth dynasty, and later green frit of silicate of lime and copper; *blue*, a similar frit differently roasted, entirely free of iron, and in the IVth dynasty blue carbonate of copper; *browns*, various ochres, some burnt; *black*, soot carbon; *grey*, black with white; *white*, efflorescent sulphate of lime. In Roman work, minium was used for light red, and madder in a base of gypsum for pink. The earlier stone painting down to Tehutmes III. is often made entirely waterproof, probably by polishing with albumen.

Stone working. The use of stone begins with the granite floor of a brick tomb, mid-Ist dynasty, and a limestone chamber of partly-dressed stone at the end of the IInd dynasty.

After the earliest mud brick temples those of the kings' pyramids were of stone, like those pyramids, from the end of the IIIrd dynasty onward. Yet mud brick was used for temples of the gods at Abydos, till stone doorways appear in the VIth dynasty, and stone buildings in the XIth dynasty.

The methods of stone working were exactly those that have been re-invented in the last century; the sawing and tube-drilling of granite by jewelled saws and drills, and the use of true drafting lines and true facing plates for working flat planes. The system for working statuary was to trace the profiles on all the faces of a block, and then work down to those by sawing; after that, the deeper hollows were taken out by tube drillings and the projections removed by hammer-dressing. The interior of stone vases was cleared by a tube-drill hole of the size of the mouth, and then enlarging the inside by drills of stone, fed with emery, skew across the hole. Thus a vase 2 feet in diameter was cut in porphyry to a thinness of $\frac{1}{4}$ inch. The outside was worked diagonally by blocks of emery. There was no lathe cutting, even in Roman times; and it is curious that the rings on wooden legs of stools are all hand-worked in imitation of lathe turning, which seems to have existed in Syria. All kinds of short cuts were made in decadent

times, as forming stone vases in two halves joined round the greatest diameter (in IInd dynasty); drilling a vase right through and plugging the bottom; making a lip in a separate piece; and, using a paste of blackened mud, with chips of white limestone in it, to imitate porphyry.

Luxury was prominent in all the wealthy periods, the Ist, Vth, XIIth, XVIIIth, XXVIth dynasties, and Ptolemaic age; and with it usually went corruption. The abundance of flowers at all seasons, the extravagant gardening, and the richness in perfumes astonished the Greeks. The profuse use of flowers at festivals is shown by the funeral papyrus recounting the gifts of Ramessu III.

The *exchange* of produce begins with barter, and from a tomb-painting of a market in the Vth dynasty it is seen that simple barter was then the rule. There is no mention there of a common standard of value. The principle of exchanging bread and beer was based on the amount of each produced from an equal quantity of corn. In the final decay of the monetary system by inflated debasement, the late Romans returned to a primitive system and demanded taxes in kind instead of in money.

The rise of a common standard begins in the Middle Kingdom, when goods and cattle were valued in an equivalent weight of copper. Some

copper anklets, of XVIIIth dynasty, show nearly equal weights, apparently of a Syrian standard. Gold was circulated in rings, and probably silver also. There is a probability, from the tax lists of the XVIIIth dynasty, that these rings were a *deben* each (1,400 grains). In the XXth dynasty, the tomb robberies are reported not as of objects, but by value in copper. The first coinage used in Egypt was the early Greek silver of the Aegean, and no attempt was made to issue an Egyptian coinage until the Persian struck silver with an Egyptian owl and flail; yet this was on a Syrian and not on an Egyptian standard. The Ptolemaic gold, silver, and copper currency was the final establishment of a coinage. It was debased under the later Ptolemies, and went entirely to pieces under Roman mismanagement, and nominal prices became as fabulous as those in Austria or Russia now.

For measure, the earliest unit was probably the finger-breadth, and a measure of twenty fingers made the *remen*, 14·6 inches, the basis of land measure. Also a cubit was commonly used for masonry, which was the diagonal of the *remen*, 20·6 inches. The square of 100 cubits was the *sethăt*, or *arura* of Greek times, used as a land unit, this being the equal of twice the 100 *remen* square. For road measures, the towing stage on the Nile was 20,000 cubits, or on land the

schoenus was 12,000, divided into shorter lengths of 1,000 cubits. The capacity measure was the *henu*, 29·2 cubic inches, or $\frac{5}{6}$ pint, 10 to the *hegt*, and 20 *heqt* to the *khar*, which was $\frac{2}{3}$ of the cubit cubed.

For weight, the unit of the Ist prehistoric period was the *nub* or gold unit, 210 grains; of the IInd prehistoric, the unit was the shekel, 128 grains; the dynastic unit was the *qedet*, 145 grains; 10 *qedet* made the *deben*. The relations of measure and weight were that the *henu* of water was 5 *deben*, and the *khar* of water was 1,000 *deben*, the cubic cubit being 300 *henu* or 1,500 *deben*. This last multiple is unlikely for the origination of a standard on the decimal system of Egypt, and is perhaps therefore an approximation. Taking the cubit of 20·63 inches as the most accurate basis, the *henu* would be 29·27 cubic inches, and the *deben* 1478·6 grains. There were also many other standards of length, volume and weight, well known in Egypt.

Time was reckoned in months of thirty days, with five over at the end of the year. There were three seasons of four months each, called *growing*, *housing*, and *inundation*. Each month was divided into three decades. The day was of twelve hours, and night of twelve hours. The loss of a quarter of a day each year led to the nominal months retrograding in the seasons in

the course of 1,460 years, known as the Sothis cycle, from Sothis (Sirius) being observed at sunrise, to fix the beginning of the year.

There were public weighers appointed to certify the amount of goods bought and sold. At present, in Egyptian markets, weights of all kinds may be seen; brick-bats, scraps of stone, bits of china plates, ancient weights and coins, all serve without any proof of amount.

The *foreign trade* was in four distinct branches—Nubia, Red Sea and Punt, Syria, and Western. The Nubian trade was very early, the break-up of the second prehistoric age being largely a Nubian immigration.

The main activity in the Old Kingdom was by expeditions into Nubia of the Vth and VIth dynasties, partly for residing, partly for tribute, sometimes to join Nubians in a raid on another district. There is no evidence of regular trade in this time. Then, in the dark age of the VIIIth—Xth dynasties, a people closely like the Galla held Upper Egypt; they probably entered from the south, but fully adopted the traditions of Egyptian art. The XIth dynasty raided the south again, and a native king was contemporary there with the rise of the XIIth dynasty. Senusert I., under his father, held the land up to Korosko, and later up to the Third Cataract. The administrative capital was at

Kerma, just north of that cataract, and there Hepzefa, the great governor of the Sudan, was buried. A main facility for communication was the canal made by Senusert III. past the cataract of Aswan, which was 34 feet wide and 24 feet deep, large enough for any Nile cargo boat, and much better for traffic than the present railway. At Semneh, above the second cataract, he fixed his boundary, and called on his successors to defend it. No negro was to pass the boundary either on foot or by boat, nor any cattle of the negroes, except when they came for trade or business; in no case were boats to be allowed to pass. They could not get along rapidly on foot, but boats might drift far down and be dangerous. This frontier was maintained for at least 250 years, till Neferhetep, of the XIIIth dynasty, but soon after a native king appears ruling below that down to Korosko.

The XVIIth dynasty, coming from the south, were naturally in full connection with Nubia, and Amenhetep I. appears at Ibrim, and his wooden tablets are found even at Meroe (lat. 16° 55′), far beyond the utmost reach of the XIIth dynasty. The later kings are not found recorded so far south. Tehutmes II. and Amenhetep III. at Napata (18° 30′) are the most distant. After the collapse of Atenism, Ramessu II. again secured Napata, the rest of his dynasty only held

Wady Halfa, and Ramessu III. a little farther to Semneh. After that, only the Ethiopian dynasty held Napata, the Egyptian kings seldom went south of Aswan, and only Psamtek II. led an expedition into Nubia. Thus there was a close contact with Nubia in the XIIth dynasty, governed from Kerma (19° 40′), and a vigorous control, in the XVIIIth and early XIXth, reaching up to Napata (18° 30′).

The tribute of Nubia and the Sudan consisted of much gold, male and female slaves, frankincense, gums, oxen, corn, ivory, ebony and panthers' skins.

The Red Sea trade was mainly carried on by the desert road from the Nile near Koptos. The quantity of coral reefs made the navigation very difficult against the prevalent north wind between Berenice and Suez; hence the ports were kept to the south. The road by Hammamat from Koptos was improved by digging wells and cisterns, and establishing outposts at the watering stations in the Middle Kingdom. Sety I. also re-opened the water supply for this desert road, as well as for the temple of Wady Abad, further south, which led to the gold mines. The ports on the Nile varied from Koptos to Qus, and later to Qeneh. On the Red Sea the earliest and most direct was Qoseyr (Philotera in later time); to the north was the Wady Gasus as a port, and

beyond that Myos Hormos; to the south Nechesia, and then, in order to avoid the reefs, a much more southerly port of Berenice was adopted in the latitude of Aswan. The road to Berenice was 250 miles long, in eleven stages; so difficult was the navigation against the north wind that this was preferred to the road of ninety miles to Qoseyr. In early times the purpose of this road was for navigation to Punt. Expeditions were sent to that land in the Vth dynasty under Assa, in the XIth by Sonkh-ka-ra, in the XIIth by Amenemhat II., and especially the great expedition most fully recorded by Hatshepsut in the XVIIIth dynasty. This last expedition has been supposed to have passed by a canal from the Nile to the Red Sea. The representation, however, does not bear that out. It is only stated that the boats are returning to Thebes, that is to say starting; and the fishes in the water of that scene are not Nile fish, but are identical with those in the scene of the arrival at Punt. In later times the Red Sea trade was not only with Punt, but with the Arabian coasts and with India. Strabo says that "Large fleets are despatched as far as India and the extremities of Ethiopia." This must mean some African region far beyond that passed on the way to India, and points at least to Zanzibar. In the second century,

Roman merchants reached China, and certainly all Burmah was fairly mapped by Ptolemy.

With Syria there had been frequent contact from early times. The lazuli of Persia was being traded into prehistoric Egypt by S.D., 36. The second prehistoric people probably came from the Syrian border, and brought the earliest piece of glass known; stray pieces of glass continued to be imported from Syria, until the Syrian craftsmen were brought into Egypt under the XVIIIth dynasty, when the manufacture was started in Egypt. There was certainly an Egyptian temple in Byblos, north of Beyrut, in the Vth dynasty, by the vase found there; and a princess was buried there with full Egyptian honours in the XIIth dynasty. Wars on the upland tribes are recorded in the Vth dynasty. During the VIth dynasty North Syrians were flocking into Egypt, bringing their curious button badges, which imitate Egyptian subjects; these people led the way for the VIIth and VIIIth dynasties, which were of Syrian kings, ruling Egypt as a secondary kingdom. The North Syrian kingdom seems to have entirely decayed, as there is no trace of it in the Bedawy life of Palestine, described by Sanehat, the fugitive son of Amenemhat I. Neither Syrian nor Egyptian ruled Palestine at that time, but royal messengers passed through the land from

Egypt. Syrian trade dominated the Wady Tumilat and eastern frontier, as at Retabeh there was not a single weight of Egyptian standard among ten found there (P.H.I., 34). Senusert III. had a campaign against the Retenu and the Aamu, but these were hill people, and we hear nothing about the coast. From the influence at Byblos, it is hard to suppose that the shippers trading there disregarded all the two hundred miles of fertile coast on the way. It seems probable that there was coastal trade, with occasional fighting inland. The Aamu were settling occasionally in Egypt, as we see by the party of thirty-seven commemorated at Beni Hasan. They were clad in gay garments made of narrow strips of pattern (carton-weaving ?) sewn together. There was also a colony of 110 Aamu under an Egyptian, User-khepesh (P.S.C. XV. AC). These led on to the next great Syrian occupation by the Hyksos, probably precipitated by pressure from the central Asian horde of the Kassites. The Hyksos occupation probably widened Egyptian trade, as we see objects of Khyan found in Crete and Baghdad ; also the second Hyksos dynasty were called "lords of the north," and "sea-kings" on their scarabs. Though expelled politically by the XVIIth and XVIIIth dynasties, the intercourse went on more than ever. The occupation by

Egypt of Syria up to the Euphrates brought all the Syrian products and their makers into Egypt; the taste, the physiognomy, the beliefs of Syria penetrated Egypt permanently. All this gave a great impetus to trade, and Syria was the fashion in ornament, musical instruments, food, wines and beer. Besides the sea trade there was an incessant flow of business across the land frontier, as a few pages of a register have shown. The bulk of the wood for all good furniture came from the straight-grained pines and cedars of Syria, imported as rafts of trunks along the coast. The mission of Unuamen in the XXIst dynasty shows how much of this had been going on in the past, and even in the low state of Egypt he succeeded at last in getting off the stocks of timber that were wanted at Thebes. Chariots and horses went through by land from Egypt to North Syria, and furniture from Babylonia to Egypt; there was also a trade in linen, including the embroidered sails which are figured on Egyptian boats (1 Kings x., 28–9; Ezek. xxvii., 7).

By the time of the XXVIth dynasty the Phoenician came to the front, and took up the Egyptian trade; this being in foreign hands, the Egyptians then taxed it, as a source of revenue. Finally the rise of Alexandria and the fall of Tyre wiped out the Phoenician trade, and set

Egypt entirely open to the west. When Egypt was most flourishing, under Tehutmes III. and the early Ptolemies, we find that corn was imported; this shows that there was a surplus population depending on foreign tribute or on trade for subsistence. It is not likely that the import of foreign slaves would be large enough to upset the economic conditions, as slavery never had the great proportion that it attained in Greece. These imports, then, must be taken as evidence that the population had increased rapidly upon the foreign connections, and was in excess of the natural limits of the country whenever strained by bad seasons.

The Mediterranean area was the last developed of the great trade connections, mainly owing to its lands being later organised. In the first prehistoric period, emery must have been used in cutting the mace heads of quartzose rocks, which indicates an Aegean trade; in the second period the obsidian from Samos, the electrum of Pactolus, and (in the IInd dynasty) the gold, probably from Transylvania, all show what was crossing the seas. In the Ist dynasty the black pottery cups in which red paint was imported, and the black amphorae, exactly like those of Knossos, are evidence that the Cretan trade then existed. What the ships were like in which this trade was carried we know from

the prehistoric vase paintings. They were of all sizes up to about 100 feet long, rowed with oars, so close together that probably there were two lines of rowers on a side; they had two cabins with a connecting bridge between the roofs, and shelters on the top; and they carried the ensign of their port on a pole at the stern cabin. The steering was done with a large oar, and the look-out in the bows had the shelter of a branch to shade him. In the Old Kingdom the copying of Egyptian forms of bowls in Crete shows a continued connection. In the Middle Kingdom there is the painted Cretan pottery (Kamareis ware) imported into Egypt. The great constructions of a harbour at Alexandria—now submerged—have been referred to the Cretan trade; but as the sinking of the north coast took place entirely in Roman times, these structures must have been effective down to the Ptolemaic age, whenever they were built.

Under Amenhetep III. there was a great extension of foreign intercourse; glazed pottery and scarabs of him and Queen Tyi are found in Mykenae; and the Egyptian metal work of inlay, known under Aahmes I., was copied later in Greece, so closely that it is difficult to say to which country the style is to be assigned. In the rubbish of Akhenaten's palace there were pieces of about 800 Aegean vases; but this active

trade faded in the disintegration of the Ramessides and of the Dorian invasion of Greece.

By 700 B.C. the Greek traders were pushing into the Delta, and such trade is referred by Athenaeus to 688 B.C. When Psamtek had won the kingdom with the help of Greek mercenaries, he settled them (about 664 B.C.) on each side of the Delta, at the forts of Naukratis on the west and Daphnai on the east, where their remains are found. After the collapse of the Hellenic party who supported Apries, they were cut down to only one treaty port, Naukratis (about 570 B.C.); this opened the way for Nebuchadrezzar to march past the deserted Daphnai in 568 B.C. on his way to attack Egypt.

This abolition of the eastern fortress of Greeks also opened the way in 525 B.C. for the Persians to enter and hold Egypt for more than a century. The Greek trade flourished during these times, and great quantities of sham Egyptian scarabs and statuettes were made at Naukratis and gold work at Daphnai, mainly for export to Rhodes, and thence to the rest of the Greek world. This is only the petty trade that can be earmarked; but the larger trade, as that of corn to Macedon in the Periclean age, and gigantic Greek wine jars found at Daphnai, passed in abundant shipping to and fro.

After the Macedonian conquest, and the

foundation of Alexandria, Egypt became practically part of the Greek world of commerce. By 250 B.C. the Graeco-Jewish foundation of Alexandria was probably the richest city in the world by its trade; and it is doubtful if it ever had a rival except in Rome, and later in New Rome, until its destruction by the barbarous hordes of Islam.

For Transport the Nile was, of course, the supreme road, and no other was needed for long distances, as the country is only the bed of the full Nile. Where great weights had to be moved to or from the river or canal, carefully graded roads of solid construction were built. Each pyramid had roads to take the blocks of stone up to it; and probably a dozen roads were required for the large pyramids, which had to be supplied with 1,000 blocks each day of the working season. The great causeway of Khufu was 1,000 yards long and 60 feet wide, looked on by Herodotos as comparable with the pyramid itself. Where a rock base, or blocks, could not be used for a track, wooden cross-sleepers were laid down, and probably planks along the line of motion. Where an ordinary road crossed the desert, all stones were swept to the sides, leaving a clear space 50 cubits (85 feet) wide; sometimes waymarks were put at each 1,000 and 12,000 cubits (one-third of a mile and four miles).

Dragging colossi into place required carefully made roads, which were specially described. For raising colossi into place, they were drawn up a long incline, feet foremost, and then tipped over the head of it, so as to come down upon the base. The obelisks were transported on barges lashed together; and in Roman times, the sea-going ship which the Egyptians made for sending an obelisk to Rome was thought so wonderful that Augustus ordered it to be consecrated (P.N.H., xxxvi., 14).

CHAPTER VI

CONSTRUCTIONS

The primitive dwellings of the desert tribes are wind-screens of rough stones, piled up when sleeping on the open desert. The next stage is a tent, open on the lee side; next, this has a screen of reeds put on the windward to break the blast, and then extended in front to keep infants and goats from straying. In later growth, the tent has a wall of brick put round it for warmth, the ropes stretching out through holes in the wall; lastly the tent roof is abandoned, and a pole and thatch roof completes the house. All of these stages may be seen at present.

In the Egyptian plain, however, reeds continued to play a large part. To this day, rows of reed huts are put up amid the spring pastures, in order to keep watch on the cattle; and Diodoros says that the shepherds then, as now, made their houses of reeds. Among reeds must be included the stems of the durra maize, which is more often used. The primitive figures of shrines continued as a religious survival into the early dynasties. We see there the cubical hut, with two pillars of

reed in front, supporting a cross-bundle, on which rests the reed roof stretching far over the open front for shade. Exactly the same thing is made in Upper Egypt at present for a field-shelter.

The reed construction lends itself to plastering with the ever-present Nile mud, and pillars of reeds and mud will support heavy *shadufs* of two or three hundred-weight swinging about on them. When the reed screen is mud-plastered, a wall is begun. From the first prehistoric age there is a model of a wall with men looking over it. In the second prehistoric, there is a model of a house with logs of wood over the door, and used for sill and window top.

Bricks are begun by Nature in Egypt. As the soil dries and cracks, large lumps can be lifted out, and are piled up in rough walls for cattle fences. Regular bricks were made in the later prehistoric period, used for lining graves, and for large constructions in the Ist dynasty.

Wooden houses were used by wealthy chiefs. The planks, about 12 to 14 inches wide, and 6 or 7 feet high, were set upright, overlapping so as to form a panel-pattern; being lashed together at the edges, the over-lap was kept close, and slid to and fro, as the night dews or scirocco expanded or contracted the wood. The doorways were all along the sides, so as to give

plenty of air when still and warm. They projected into the hall, and so left sleeping spaces between each, where the chief's followers could sleep as a guard around the hall. When the inundation came, the whole house could be moved up on to the desert in a day, and set up again ; when the spring pastures were green, the house could be moved down among the reed huts of the shepherds. This pattern of house gave rise to the copying of the external panelling in brick-work for the " eternal house " of the dead chief, a pattern which lasted down to the XVIIIth dynasty.

The type of the peasants' houses has, curiously enough, been preserved to us by the pottery models, which were set by the graves for the dwelling of the soul, an idea familiar to the African in the present time. The simplest are merely a shelter open on one side ; others have a room at the back of the shelter, which becomes a portico. Then steps give access to the roof ; shelters are added on the top, and a complete upper storey appears, with granaries on the top of that, and two storeys of stairway to reach them. The brick arching of the floors to the upper rooms, the details of palm-columns, the triangular battlements on the top of the walls (as on present tombs), the ventilators in the roof to catch the breeze—all these small details are thus preserved.

The furniture is also modelled—a high-backed chair, a couch, the stand for the water jars, and the stone corn-grinder on a stand, placed beneath the stairs, with a woman grinding.

When there was a new town required for public works, the whole was laid out in regular streets, straight and parallel, as at Kahun in the XIIth dynasty. The houses may be of any size, from four rooms to sixty, and each street contains a uniform size of house. The streets vary in length; one is 62 feet long for two houses, others are 230 feet long for eight or nine houses; the main street of mansions, 900 feet long, has eight great houses along it. The streets vary from 11 to 15 feet wide. They had a channel of stone down the middle for a drain, like the old English kennel. There was no separate footway, because there were no vehicles in such a town.

The simplest house had an open court opposite to the entrance, a common room on one side, and two store rooms on the other, with a stairway up to the roof. The larger type for artisans had an open court, four rooms opening off it, and five others dependent on the outer rooms. Usually the rooms were covered with poles and thatch; larger rooms had a barrel vault of brickwork. All the doorways were arched. The stairways go up in two short flights of half a dozen steps, with a turn in the middle: the steps are about 27

inches wide. The fire was usually against one side of a room, with a few bricks to support the cooking pots. The doors were of wood, with wooden sill and lintel built into the wall; when the pivot hole wore down, a bit of leather was put under the pivot, usually a piece of a worn-out sandal. In the larger houses, conical granaries are often found, about 6 feet across inside, and the width of a brick in thickness; they are sometimes grouped together with only just space enough to squeeze between them.

The great mansions are entirely different in system, but on a type which we can still trace in the palace of three thousand years later. A porter's room faces the door. There are then three ways; to the left hand a passage leads to the kitchens and men's quarters, opening also through to the best rooms; directly in front are two long parallel passages, one of which goes to the best rooms of the family, and the other leads to the women's side of the house. The kitchen and stores comprised about fourteen rooms, with a servants' hall; the family rooms and private stores were about sixteen rooms, with three halls of columns; the women's side was of thirteen rooms, and one hall of columns. At the back of the house was a large open court, with a shady colonnade, and half a dozen more store rooms. This whole establishment of fifty or sixty rooms

was entirely controlled by a single narrow entrance. The winter hall had four columns with closed roof; and the summer hall twelve columns, four on a side, around a central stone tank, open to the sky. The women's and servants' halls had each a tank and three or four columns. The open court at the back had a row of nine columns to support a roof on the south side. The master's bedroom was slightly narrowed at the south end, and opened towards the other end from a small hall with central column.

At Amarna there is an intermediate style of dwelling, belonging to the middle class officials, who abounded in the XVIIIth dynasty. The houses were detached, about 40 or 50 feet square, raised a foot or two from the desert surface and surrounded by a garden wall. On going up a few steps the visitor faced the porter's room; then a loggia, half open to the north, led along the side of the house, with an occasional room at the end for visitors. From the loggia the central hall was reached, with a low bench along one side, and a fire-pan in front of it. Usually on the west side there was the red niche for domestic worship. To this day, Islam always worships toward a niche, the *qiblah*. Opening from the central hall, there were four groups of rooms; one was the master's room, with narrower south end for the

bed, also the women's quarters and the kitchen ; another was for the men's quarters, with a secondary hall, and often a back door ; a third group consisted of small store-rooms, and, lastly, the stairs to the roof and various open cupboards.

The great houses are much more varied, and seem to have had gradual additions made to them in irregular manner, like the Amarna Palace and palaces in modern times. It is difficult to state any general system beyond that of an enclosed garden, with blocks of building for reception, for the family, for kitchens and servants and for store-rooms, placed more or less in connection. The houses of the poor had seldom any upper floor ; the better class and the great nobles had a second floor, and a light open structure with curtains, on the top.

In the Roman age there was a large amount of building, of a durable and regular kind, and some of the finest brickwork is of about the first century (P.D.P., 55–6). The introduction of baked bricks, and a free use of hard lime plaster, raised the standard of building, which in many provincial towns is equal to any in the empire. There was certainly a wider spread of general convenience of life than in earlier times. The frequency of remote settlements along the desert, the abundance of fine hard pottery and glass,

seem to show a larger well-to-do population than in any other period. Similarly, North Africa and the Hauran show that the greatest spread of civilisation was under Roman control. The new movement of the ascetics, impelled by persecution, and later by monasticism, to settle in the desert cliffs, was by no means a mere resort to the barest form of existence. The hermits of Amarna (D.A. ii., 4) and of Abydos made excellent retreats, well paved, well sheltered, with good built-up approaches, entirely white-washed, and ornamented with pious figures and inscriptions ; they had many neat arrangements for storage, water, and cooking.

In structural detail there are various points of interest. The lighting is an entirely different question to that in less sunny countries. A very small amount of direct sky is enough for a room, and small windows suffice, or indirect light from doors. In the temples, a hole only 9 inches square in the roof is enough to light a whole chamber 30 feet below. Thus the walls of an Egyptian town, ancient or modern, are blank, with only tiny openings high up, for the ground floor, which is generally lighted from the courtyard of the house. It is usual now, and probably was formerly, to have a courtyard, or even a room, roofed over the greater part, but with a third or quarter of it left open along the northern

side, so that the sun lit the north wall, but would seldom reach the floor.

Windows in upper floors were closed by grating of various forms. In the Louvre is an ivory model of the filling in of the arch end of a barrel vault. A row of small columns with skew tops (also P.L., xxix.) occupy the sloping sides ; and two groups of lotus flowers tied together occupy the highest part. In the stone buildings there were stone gratings, the best known of which are in the Great Hall of Karnak and the temple of Medinet Habu. At Koptos were various forms of grating, vertical bars with a curved slit above, lattice of crossing bars, squares divided diagonally as solid and pierced, a six-leaved rosette opening, and a modified *onkh* sign blocking the window.

There were many different forms of columns used in the houses. The polygonal column was made both in stone and wood ; the fluted column was cut in stone ; the tent-pole column was the type in the hieroglyph, of a light structure ; the palm-leaf capital was cut in wood ; the bunches of rushes plastered over are represented in a painting ; the lotus-bud capital is of stone, as also the spreading papyrus-head capital ; the lamp-stand column is figured on the side of a doorway. There are only three types of column which are restricted to temple building.

The soil of the rooms was considered, and where it was damp it was covered with cylinders of rough earthenware, with flat tops, over which a paving of bricks was laid. Drainage from roofs was provided in order to avoid leaks, but ground drainage was never laid out, nor was there any sanitary drainage, as some form of earth closet was probably used (Herodotos, ii., 35 ; P.G.R., 20). In Roman times ground drainage is found for rain-water, by rough pottery pipes fitting together with collar and socket.

In the gardens of great houses there were subsidiary buildings. Light kiosks, of slight columns supporting a roof or matting, were much like what are used in Egypt now. Matting was always usual for screens or wall-covering. In the grounds, near the house, was the granary of the estate, composed of rows of barrel-roofed chambers, into which the grain could be poured at the top, and from which it was taken out at a sliding door below. In the tall granaries of the Ist dynasty the models show two doors, one half-way down for the full condition, and one near the bottom to clear the lower part. In every part of the grounds were trees both for fruit and for shade ; and the intense light would allow of the free growth of flowers and plants beneath trees, so that—as now in the fields—there may be two storeys of vegetation. The

tanks with fish were always an important part of a garden ; as fish are almost always shown, there was no trouble with mosquitoes or malaria. Near it, on whichever side was swampy, there were clumps of papyrus. Rows of palms and persea trees intersected and bordered the garden.

The subject of the temple structures lies outside of the present treatment, as it is part of the religious organisation, which will be dealt with in a separate volume.

The earliest roads on the desert were naturally the jackal tracks, as they follow the line of least variation, and avoid the many steep ravines which intersect the country along the edges of the Nile valley. Two well preserved desert roads start from Saqqara, one to the Oases and one to the Fayum. Both are 50 cubits wide (85 feet), clean-swept, with all the stones and pebbles piled in a ridge on either side. The Fayum road has waymarks of a pillar in a socket at every one-third of a mile, and a stele every four miles (1,000 cubits and schoenus). At Amarna there are innumerable roads, 10 or 20 feet wide, across and along the plain, roads up to the tombs, up to the steles, patrol roads, quarry and desert roads. The best are smooth-swept, with a ridge of pebbles on each side ; they deteriorate from this style, until in the far desert tracks they are only marked out by stones

on prominent points. A very curious feature is the sudden stoppage of the patrol roads, which run along the edge of the cliffs; they are well marked, and run on to the precipitous side of a gorge, and continue in the same line on the other side. They must have served separate patrols on each length between the valleys; yet what was the use of patrols up there is hard to see, as any one approaching from the desert would go down the valleys.

The roads across from the Mediterranean to the Red Sea are described by Pliny as running from (1) Pelusium, or (2) just to the east at Gerron, or (3) much farther east by Mt. Casius, and all joining at about half-way across to Suez, then called Berenice.

The roads in the cultivation are mere tracks between fields, sufficient for the donkeys, and later for the camels brought in by the Arabs. More regular tracks go along the canal banks; and the most important ways are on the top of the ancient dykes which run from the Nile to the desert, dividing the country into a series of basins for retaining the water of the inundation. These dykes are as old as the Ist Dynasty, belonging to the great irrigation works attributed by later writers to the age of Mena. Such dykes were the natural roads ever since they were made, especially during the inundation months,

when there is no other dry ground in the valley. The cemeteries, therefore, are regularly placed on the desert at the end of the dykes, but only from the historic age ; the prehistoric cemeteries are along other parts of the desert edge.

The greatest single work connected with the irrigation was the control of the submerged oasis of the Fayum, which, lying close to the Nile valley, became flooded at the high Nile. The branch valley through which the water runs is a natural depression, which was probably weathered down during the age when the water level was much lower, and the Nile valley some 200 or 300 feet deeper. There are many such wide side valleys a little above the Nile level at present. On the rise of the water level it began to flow over into the Fayum depression by a channel three-quarters of a mile wide, carrying Nile mud which formed a submerged table-land near the inflow.

As early as the IIIrd or IVth dynasty the site of the capital, now Medineh, was reclaimed from the highest mud flat by dyking around it. This date is shown by a large flint knife found in the temple site (P.H.B., xxviii., 5), the age of which can be fixed by later discoveries at Abydos (P. Ab. I., xix. ; Ab. II., 5, lix.). The district was known as " the lake," later as " the sea," *pa-yum*, Fayum. Amenemhat I. certainly honoured

the temple, and Amenemhat III. rebuilt it (P.H.B., xxvii., 10, 11). He also found something —probably the dyke—going to ruin at Biahmu, and ordered its restoration, according to his granite inscription (P.H.B., xxvii., 1), at the same time setting up there his colossi of quartzite looking over the lake (P.H.B., xxvi.). Thus there was a large reservoir established whereby the high Nile surplus could be impounded in the Fayum, through locks, and then run off again at low Nile. The area of the lake was some 700 square miles. This system remained working till the time of Herodotos; but, soon after, Ptolemy I., requiring fresh land for his veteran Greeks, abandoned the use of the lake for return water, and limited the inflow so that it dried up gradually, and the exposed shores were settled as farms. Occasionally the Nile has burst in and cut deep gorges through the accumulated mud, but the district has never been drowned out. The references to the outflow by Diodoros and Strabo are probably due to their copying older authorities, as the Ptolemaic soldiers were already settled on reclaimed land. A survey of the levels, and earliest dates of the sites, around the basin is required to settle the exact history of its changes.

The wide-spread irrigation system was established by the Ist dynasty, as shown on a mace-

head of the scorpion king; he is holding the hoe for digging, while men are working, partly in the water, making a dam (Q.H., xxvi c).

In the primitive condition the agricultural land had been irregularly acquired, intersected with swampy regions and thickets of papyrus; especially was there need of control along the desert edge, which received less of the Nile mud, and so was at a lower level than the rest of the plain. Drainage was essential to remove stagnant water, and because salts were continually working up from the strata below and needed to be washed away. Any land that is not drained becomes useless by the crust of salt formed on it, as at present at the south-west of the Wady Tumilat. The system which has grown up by modern control is a completely duplicated set of canals, the higher level to supply fresh water, the lower level to drain away salt water.

The first step taken by the "rulers of the inundation" was to divide the country into large basins, by dykes a few miles apart, and a great dyke along the Nile side. Thus the flow of inundation over the land could be regulated according to the amount required, and the need of any particular crop: the water, when admitted, stood for a time so as to deposit the finest mud, which was the most easily decomposed for plant supplies, and it could be run off when there was

sufficient fall to carry it away, and so wash off any salt which had arisen. This basin irrigation has lasted down to our time, and has only been abolished in favour of perennial canal irrigation in the last few years. The effect is not quite satisfactory; the people have not the habit of control needed for the new system; they let the high-level supply run too long and raise the water-table in the soil, so that cotton suffers by water-logging, and a field is often useless by being flooded when it should be in full crop.

The management necessarily depended on exact knowledge of the height of the river, and this was recorded for every year from the Ist dynasty onward, and measured at Nilometers in several places. There were large sluices and lock-gates, but for a great flow they seem to have used simply an earth dam, which was cut away at the suitable time. Diodoros says that opening and closing the Fayum dam cost fifty talents each time. Great dams were used till modern times, and cutting the dam of the canal at Cairo was the greatest festival of the year. The Wady Tumilat canal at Zagazig was also recently dammed till far into the winter. All these ancient methods, however, are now fast vanishing, with the spread of barrages and sluice-gates on every canal.

The preservation of the dykes was a very

important service during high Nile; guards watched them, and on the most important, such as the great Fayum dyke, a continuous line of guards, within call one of another, kept a look-out day and night, with supplies of beams and ropes to deal with any leak. In Roman times, any one spoiling a dyke was sent to hard labour or exiled to the Oasis: I have seen a man soundly bastinadoed for stealing materials from the dyke guard. During ages past, many breaks have occurred; and as it is essential to patch a break upstream, for securing the patch, so each break is marked by a bend. Many dykes, therefore, wind about in a serpentine fashion, for no one thinks of changing the repair to a straight line.

The Nile canal to the Red Sea has an uncertain history. Whether the ships of Hatshepsut could come through from Punt up to Thebes has not been settled. The vessels' "going to Thebes" does not prove more than their departure, and the water on which they sail is represented as having the same Red Sea fishes as in the scene of arrival at Punt. That there was a Nile canal far to the east is certain, as Sety I. is shown crossing a canal swarming with crocodiles, over which was a bridge, guarded by fortified gates, on the road to Syria. If a canal reached Hero-opolis, west of the present Lake Timsah, at

Tell Maskhuta, there was no need of a ship canal farther, as the Gulf of Suez in Roman times reached up to that point. Strabo says that Sesostris (Ramessu II.) first cut the canal, but Darius nearly completed it, yet desisted from fear of the Red Sea being higher than Egypt, a fable which also hindered Napoleon, owing to bad levelling by his engineers. Herodotos says (ii., 158) Necho began the canal—or rather carried it forward—and Darius completed it, so that two triremes could pass in it, from the Nile at Bubastis to the Red Sea. The canal was also continued northward to Pelusium according to Diodoros, so that "from the Pelusiac mouth to the Arabian Gulf and the Red Sea is a canal cut"; after Necho and Darius, "the last attempt was made by Ptolemy the Second, who cut a sluice across the isthmus in a more convenient place, which he opened when he had a mind to sail down that way, and then presently shut up again . . . the river is called Ptolemy . . . where it falls into the sea, there is a city built called Arsinoe," that is, north of Suez. The monuments of Darius are known on the south of the canal line, near Tell Maskhuta, at the terminus Arsinoe, and at two intermediate points. The evidence seems to be that there was some kind of waterway to the Red Sea from the time of the XIXth dynasty, probably by a Nile canal

to the head of the water at Maskhuta-Hero, and thence by natural shallows, enough for light boats. Necho attempted to dredge or cut a canal sufficient for ships, but, failing that, he built them in the Mediterranean and Red Sea. Darius certainly carried out a great canal, as his series of fine granite monuments shows, and it is impossible to suppose that when the water in it came near the Red Sea, any difference of level would be imagined. The evidence of Herodotos, that Darius completed it, shows that the story of Diodoros and Strabo is only transferred from Necho. Only Diodoros states that a canal was cut by Ptolemy Philadelphos from the Pelusiac mouth, *i.e.*, a canal from the Mediterranean; and this seems to be due to some confusion, as there is no other evidence for it. The highest ground traversed by the direct modern canal is 52 feet high; but an ancient canal might have followed the present fresh-water Abbasiyeh canal to El Qantara without any great difficulty, so the ground levels do not prohibit our accepting the statement of Diodoros.

On the opposite side of Egypt there are some surprising works for water in the Oases. A deep bed of sandstone is saturated with water which cannot rise owing to impervious shale beds over it. On sinking through these, an artesian flow rises to the surface, and pours out

ready for irrigation. There is also a wet sandstone above the shales from which good flows can be obtained, but only scantily. The Persian or Roman engineers, however, reached better supplies by running tunnels two or three miles long to cut across the natural fissures and so collect a free supply. In order to raise the rock chips it was needful to cut about an equal amount of shafts from the surface (B.E.O., 176). The Roman forts were put on elevations, a well sunk down to the wet sandstone for water supply, and then a tunnel cut from lower ground into the well, to tap it for irrigation. By neglect many of the ancient wells have been ruined, but a few are still flowing perpetually at several hundred gallons a minute.

The great amount of stone building from the IVth dynasty onward required prodigious quarrying, which is found wherever there is good stone. The sandstone quarries are all open pits, and many of the limestone quarries likewise. Where a fissure existed, the stone is of unequal and harder quality, so it was carefully avoided. Thus the sandstone quarries are divided by walls of rock left in place, each containing a fissure. Ways were cut through these walls for access. The stone was never wasted, as in modern times, by removing irregular lumps, and cutting them down afterwards. The quarry was worked by

trenches cut around each block, just wide enough for the arm and pick, to a distance of two or three feet inward; larger blocks were cut out by a trench just wide enough for a man to squeeze through. Most of the limestone quarries are cut into the face of cliffs, which are too high to be removed. The size of an intended gallery was marked on the face, and then cut inward. The stone was first cut out at the top, and then, successively, blocks beneath that were detached. Parallel galleries were run, and cross galleries, so that at last the hundreds of feet of rock above rested on pillars of a quarter of the area. Sometimes careless workmen have cut away the pillars as the material easiest to reach. Then layers of roof fell, till vast naturally-domed halls remain, hundreds of feet across. The quarries often contain inscriptions of the quarrymen, and of later occupants who fled there for refuge in persecutions. The same system of quarrying was followed in cutting out the great halls of rock tombs, the blocks removed probably serving to build the house for the living noble in the plain, while the quarry was his "eternal house" on the desert.

Not much mining was done in Egypt. The gold mines were distant in the eastern desert; in Roman times they were carried far into the rock, where lamps were needed, fastened to the

foreheads of the miners. The rock was white quartz, which had to be broken up, pounded, and ground as fine as flour, after which the gold was separated by washing.

In Sinai, turquoise, and malachite for copper and frit, were mined in sandstone. The mines are not deep, being lighted from outside, and they follow the strata containing the minerals. Very extensive alum mines are found in the north of Kharga oasis (B.E.O., 223). Salt was obtained from the Oases and from the Isthmus of Suez.

A large amount of fortification was made in all ages in Egypt. There were boundary walls in the Ist dynasty, when "going round the wall," or inspecting the frontiers, was the first duty that a new king undertook. In the XIIth dynasty, Sanehat, near Belbeys, "reached the walls of the prince built to repel the Sati." A wall remains in fair condition which was built at some unknown period to defend the cataract region from the tribes of the eastern desert.

The oldest fortress which remains is that of the IInd dynasty at Abydos, known as the Shuneh. The main wall, 17 feet thick, is still 34 feet high. Up to 21 feet it seems to have been built all at once; above that, stages of six courses were added at one time, perhaps yearly. The outside is 407 feet long and 210 feet wide.

Around it is a space 10½ feet wide, and then another high fender-wall, 9½ feet thick. Thus, direct battering was prevented on the main wall; and if the enemy entered between the walls, he could not retreat easily, but could be pounded with heavy bricks from above. There are large chamber gateways to E.S.E. and N.N.E., and narrow openings on the west and south. Strangely, there is no trace of a gangway to the top, nor of any attachment for a wooden stair, yet access to the top would be essential for defence. Two other forts of the same kind are close by this, one removed to the foundations, the other occupied as the Coptic Deir. Forts were also built in southern Syria in the Vth dynasty, as there is a scene of the siege of a fort by scaling ladder and by mining.

In the XIIth dynasty, at the very important frontier fortress of Semneh, a new principle appears of throwing forward solid towers along the wall, so that any attack could be repelled on three sides, while if the towers were destroyed it would not injure the fortress. The wall rose to 82 feet above the plain. Outside of this a ditch encircled the building, with a stone glacis outside of the ditch. Thus the enemy could be attacked by archery on two awkward slopes, of glacis and of ditch, before he reached the wall. Beams of wood laid in the brickwork steadied it, so that a

considerable breach below would not imperil a fall of the upper part. The mixture of wood with brickwork is found as far back as the time of Sneferu.

The foreign forts represented at Beni Hasan in the XIIth dynasty are apparently of mud bricks. They have rounded triangular battlements, like those on the soul-houses of Xth dynasty and on modern tombs. There are projecting balconies for fighting from, and a long slope at the foot of the wall to prevent mining. This belongs to some foreign people who are being attacked by Egyptians with both Libyan and Syrian auxiliaries (N. Bh. I., xiv.; II., xv.). The Egyptians attack with long poles to loosen the wall, fighting under a cover.

From the portions of a fortress excavated at Tell Maskhuta it seems that the XIXth dynasty had the same system which we know best from the XXVIth dynasty. In that age, at Daphnai and at Naukratis, large blocks of brickwork were erected, with a cellular structure filled up with rubbish. That at Daphnai was certainly built by Psamthek I., and is 142 feet square, that at Naukratis is 180 feet square. These forts are each in an outer camp; the measurement, over all, of the camp is, at Daphnai 1,260 by 2,100 feet, at Naukratis 848 by 960 feet. The thickness of the wall is from 40 to 50 feet. The square block

of the fort was about 40 feet high, and formed a platform on which buildings were erected. If an enemy mined it, the only result would be the sinking down of the filling of a pit, which could be easily refilled from the top.

In the Roman age this system was entirely abandoned, and brick fortresses with great hollow bastions, half-round outside, were built, as at Babylon, near Cairo, like the well-known Roman fortresses in the West.

There was an entirely foreign type of fort brought in by the Hyksos, and only used by them. A massive bank of earth was thrown up, in plan a square about 1,500 feet across, with rounded corners. The outer slope of it was variable, but averaged about 40 degrees; it was coated with mud plaster and stucco, so that it was impossible to get a footing upon it. The bank was about 40 feet high, and 130 feet wide on the top. The entrance was by a sloping ascent over 200 feet long, and an advanced wall on each side gave space for a large body of archers to rake the whole length of the ascent. This is best known from the fort at Tell el Yehudiyeh, which is probably the ancient Avaris (P.H.I., p. 9, ii.–iv.). Here the Hyksos later built a stone wall 6 feet thick, along the foot of the sloping face, and filled in the space behind it.

There is a similar fort at Heliopolis, without

the addition of a stone wall (P.H.K.A., i, ii.). It resembles Avaris in every other respect, and is of just the same size.

Defensive Forces.

Having observed the material means of defence, we turn to the structure of the fighting force for which they were built. The successive invasions which occupied Egypt—the Libyans from the West, the second civilisation of Asiatics, and the dynastic people—each had to fight to get a footing, and to fight to retain it. In the triumph of Normer (Mena) he records the capture of 120,000 men, 400,000 oxen, and 1,422,000 goats. This implies a large and well-organised army to seize and control such great numbers. In the IInd dynasty the defeat of the "rebels" is shown by 47,209 slaughtered enemies, and here the Egyptian love of minute accounts is already seen. At the end of the IIIrd dynasty, Sneferu defeated the negroes and brought back 7,000 captives and 200,000 cattle. All of this fighting involved weeks of expeditions, with the feeding of tens of thousands of soldiers, and shows capable organisation. In the Vth dynasty the Libyan war ended in bringing 832,941 cattle into Egypt.

It seems that these wars were by a levy of the military third of the population, or perhaps a

levy on the whole. But in the Middle Kingdom, while all free men were enrolled to be called up if needed for service, there was also a body of "followers of His Majesty" permanently organised, somewhat like the King's Guards, which were the starting point of the English army. The main body of the Egyptian forces was locally organised; in the XIXth dynasty there was the army of Amen from Upper Egypt, the army of Ptah from Middle Egypt, that of Ra from Heliopolis and the Upper Delta, that of Sutekh from Tanis and the Hyksos region of the Lower Delta. The army of Ptah is mentioned in the XIIth dynasty (P.S.C., xvi., AM.). For each army the nomarchs of the region were responsible, and under them the headmen of each town and village, who had to produce the requisite number of recruits. The division of the people into three classes—farmers, priests and soldiers—has already been described, but the date of its introduction is not known, so we cannot say whether the levies were on all, or on the soldiers only, in early times. The record of three classes is not stated earlier than Greek times; and it may be that earlier armies were levied on the whole of the inhabitants.

Under Sety I. the standing army was very well provided. He increased the supplies

of meat and fish, gave unlimited vegetables and 4 lbs. of bread daily, and two linen garments monthly. The king's messenger had, in addition, wine, sweet oil, olive oil, honey, and figs (B.A.R., iii., 90).

The army marched in regular ranks, each detachment with a standard on a pole. Auxiliaries of other races were employed from the earliest times. The standard bearers of Normer are of a shaven race, and a long-haired, bearded race. In the Vth dynasty, Bedawy bowmen are fighting for the Egyptians. In the XIIth dynasty the Libyan archers were auxiliaries. After the Syrian conquests of Tahutmes III., the Mozăy were a body of foreign police from Asia, and Ramessu II. had a guard of Shardana; compare with these the Germanic guard of Caligula. In Syria there were Tyrians, Shardana, and others as auxiliaries, recruited in the country. Under the XXVIth dynasty came the great change of trusting to Greek generals and Greek mercenaries; these included not only Hellenes, but Karians and other Asianic people. The army was in two main divisions, the Upper Egyptians and Eastern Delta, Kalasiries, or *Kelashery*, and the Western Delta, Hermotybies. Of the former there were 250,000, and 160,000 of the latter, who were entirely restricted to military service; besides the produce of their

land, they received a daily allowance of five pounds of bread, two pounds of meat, and four draughts of wine.

Under the Ptolemies there was a great influx of Macedonians and other Greeks ; Philadelphos had 4,000 Keltic mercenaries ; and in 213 B.C., 4,000 Thracians and Galatians were enlisted from settlers, and 2,000 more were imported. In the burials of Alexandrians, thirty-nine ethnic names comprise six Thessalians, eight other Europeans, four Islanders, three Africans, eight Asiatic Greeks, and ten Galati and Kelts. Under Rome, the two legions, Cyrenians and Galatians, continued to be recruited in the country, and outsiders were not brought in till Valens removed some Egyptian soldiery and sent Goths in their place. Arabs were accepted as auxiliaries, Palmyrene archers in the third century, and later appear Thamud Arabs, Rhaetians, Epirotes, and Pannonians.

The arms of the prehistoric time were the disc mace at first, and the pear mace later, which continued to be the official weapon of the king to the very last. The flint dagger and lance for fighting, and forked lance for hunting, were usual. The earliest metal weapon known is the flat, wide, triangular blade, usual in Italy ; rather later is the narrow blade with a deep mid-rib, as in Cyprus ; both of these are before the decadence

of the second prehistoric age. Later, about the beginning of the Ist dynasty, the copper spear, throw-stick, double-pointed mace, and bow and arrows appear. The lighter battle-axe, distinct from the heavy work-axe, comes in about the VIth dynasty. The short thick stick—the modern *nabut*—was always the favourite weapon of Egyptians, and in the XIIth dynasty they armed it with a sharp cutting edge let in, projecting about an inch. The shield was always of piebald skin; and it originated in taking off the skin cloak and holding it up to ward off blows (Q.H., lxxvi.). The sling was a Libyan weapon, used by auxiliaries.

In campaigning, the great shields were planted as a fence to the camp. Within the enclosure are placed the chariots, horses, ox-carts for baggage, and donkeys, with all the stores. The horses were not used for riding (except rarely by foreigners), but drew the chariots. The report in late times was that in Thebes were 20,000 chariots, and along the country were 100 stables, each holding 200 horses. Thus the chariots in general only had one horse, and there could be none for riding (D.B., I., p. 52). The Pharaoh's chariot is the only one represented with two horses in Egypt, but all the chariots in the scenes of battles in Syria have two horses owing to the hilly nature of the country.

The drum was used to beat time for marching, and the short straight trumpet for calls directing evolutions.

The rewards of valour (equivalent to the Victoria Cross) were usually gold ornaments. The bees and the lion were the special symbols; besides which were the more usual bracelets, necklets, clasps for the arm, and vases for ointment. Golden hatchets were also given, equivalent to a modern sword of honour, inlaid and decorated. These splendid rewards are only named in the XVIIIth dynasty. In the XIIth dynasty the royal reward was a staff of electrum, a bow, and a dagger ornamented with electrum (G.A., 33).

We have now briefly reviewed the general system of the civilisation of Egypt. We see how it is entirely the outcome of the natural features peculiar to that country—the great river of fertility in an arid desert,—the tropical sunshine tempered by healthy winds, the vigorous race subdued every few centuries by a new mixture of conquerors,—subjected to influences African, Eastern, and Western, yet always keeping its native character. From the abundance of its remains, and well-defined history, it exemplifies better than other lands the principle of indi-

viduality; it illustrates what we can also see elsewhere, how each country has its own type of culture and of humanity, and preserves that continuously however it may be buffeted in the conflict of races, or swayed by the thoughts and aims of the successive ages of the world.

Every land has grown its own civilisation, and has shown a surprising resistance to change. Egypt resisted, for thousands of years, obvious improvements used in other lands. Crete might import a few things by trade, but was entirely unchanged by Egyptian design or ideas. Syria was an Egyptian parade ground for centuries, yet adopted nothing from Egypt. Further afield, a few Egyptian products passed as rarities by trade, but not a shadow of Egyptian influence appears. Even in the greatest examples of influence, those of the Greek and Roman conquests of the world, there is scarcely any country that did not lose the effects of those dominations in as few centuries as it had taken to acquire them. We may see in the Russians of to-day how rapidly the civilisation imposed on them two centuries ago has vanished. Nothing beyond what is self-developed in the brain of a race is permanently gained, or will survive the changes of time.

The Egyptians of the present age are not to be accepted as the race of the past. The fatal overlaying by an Arab majority has spoiled the finest

minds of the stock, though the simpler qualities remain, in conformity with the conditions which originated there. The high attainments, the permanence and continuity of Egyptian life, with a fuller record than that of any other country, will always render it the most important human growth for study, whether socially, politically, or in the history of invention, which is the life-blood of civilisation.

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